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Textbook of Rasa Shastra evam Bhaishajya Kalpana

(Ayurvediya Aushadhi Prayoga Vigyana) Vol. II

Dr. Vinay Kumar Kadibagil / Dr. Bargale Sushant Sukumar

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Text Book of
Rasa Shastra evam Bhaishajya Kalpana

(Ayurvediya Aushadhi Prayoga Vigyana)
(Vol. II)

(Subject Code- AYUG-RB)

Course Curriculum for Second Professional BAMS (Prescribed By NCISM)

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II Professional
Rasashastra Evam Bhaishajya Kalpana
Ayurvedacharya (BAMS)

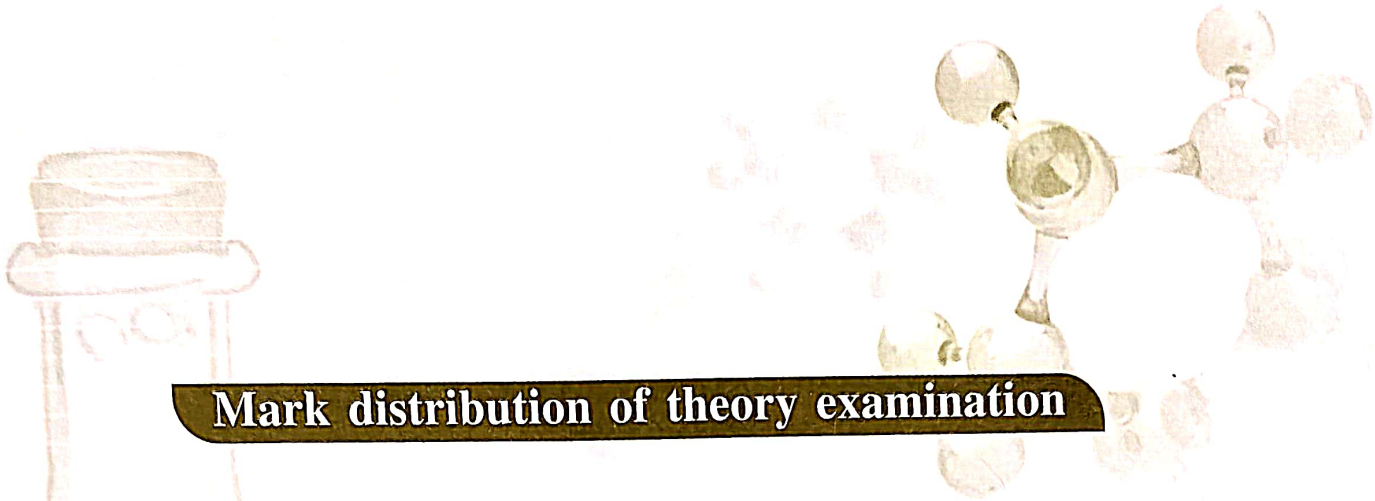
Subject Code: AyUG-RB

Summary

Total number of Teaching hours: 450			
Lecture hours (LH)-Theory		150	150(LH)
Paper I	75		
Paper II	75		
Non Lecture hours (NLH)-Theory		300	300(NLH)
Paper I & II	90		
Non Lecture hours (NLH)-Practical			
PaperI&II	210		

Examination (Papers & Mark Distribution)

Item	**Theory Component Marks**	**Practical Component Marks**			
		Practical	**Viva**	**Elective**	**IA**
Paper I	100	100	70	-	30
Paper II	100				
Sub-Total	200	200			
Total marks	400				



Mark distribution of theory examination

Paper II - Ayurvediya Aushadhi Prayoga Vigyana

Sr. No.	Chapter	Marks	MCQ (1 mark)	SAQ (5 marks)	LAQ (10 marks)
1.	Aushadhi Prayoga Vigyana	5	Yes	Yes	No
2.	Single drug (Herbal & Mineral)	10	Yes	Yes	Yes
3.	Single drug (Bhasma, Shuddha &Pishti)	15	Yes	Yes	Yes
4.	Aushadhi Kalpa -I (Compound formulations)	15	Yes	Yes	Yes
5.	Aushadhi Kalpa-II (Compound Drugs/Formulations)	15	Yes	Yes	Yes
6.	Dosage Forms & Cosmetic Products	5	Yes	Yes	No
7.	Nutraceuticals	5	Yes	Yes	No
8.	Anupana Prayoga for Aushadhi Kalpa	5	Yes	Yes	Yes
9.	Aushadhi Prayoga Marga	10	Yes	Yes	Yes
10.	Rational prescription along with safe dispensing of Ayurvedic formulations	5	No	Yes	No
11.	Traditional & Local health Practices	5	No	Yes	No
12.	Pharmacovigilance for Ayurveda drugs	5	Yes	Yes	No

Content

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CHAPTER 1

Aushadhi Prayoga Vigyana

Syllabus

Introduction, Etymology, Scope of Aushadhi Prayoga Vigyana, Prashastha Bheshaja Lakshana.

Learning objectives

Define Aushadhi Prayoga Vigyana and its scope and enlist Prashasta Bheshaja Laxana

Total - 3 hours (Lecture :01 hour, Non-lecture: 02 hours)
Marks- 5 marks MCQ- Yes, SAQ (5 Marks)- Yes and LAQ (10 Marks)- No

Introduction

Aushadhi Prayoga Vigyana, an integral branch of Ayurveda, deals with the science and application of medicinal substances. This field encompasses the identification, collection, preparation, and therapeutic application of various herbs, minerals, and animal products. Aushadhi Prayoga Vigyana stands at the confluence of traditional wisdom and contemporary science, aiming to harness the healing potential of natural substances while ensuring their safe and effective use.

Etymology

- Aushadhi refers to medicinal plants or substances
- Prayoga means application or practice
- Vigyana means signifies knowledge or science.

Together, the meaning Aushadi Prayoga Vigyana means the science of medicinal application, reflecting the comprehensive study and practice involved in the therapeutic use of natural substances.

Scope of Aushadhi Prayoga Vigyana

The scope of Aushadhi Prayoga Vigyana is vast, encompassing various aspects of medicinal practice. It includes the systematic study of pharmacognosy, pharmacology, and therapeutics within the context of Ayurveda. Here is a detailed exploration of its key components:

Pharmacognosy

Pharmacognosy in Aushadhi Prayoga Vigyana involves the study of natural sources of medicinal substances, primarily focusing on plants, but also including minerals and animal products. Key activities in this area include:

- **Identification and Classification**: Understanding and cataloging medicinal plants, minerals, and animal products based on their botanical and zoological characteristics.
- **Morphological Studies**: Examining the physical characteristics of these substances to identify their therapeutic potential.
- **Active Constituents**: Analyzing the chemical compounds in these natural sources that contribute to their medicinal properties.

Pharmacology

Ayurvedic pharmacology, or Dravyaguna Vigyana, examines the properties and actions of medicinal substances. This includes:

- **Rasa (Taste)**: Understanding the taste of a substance and its initial impact on the body.

- **Guna (Qualities)**: Identifying the inherent qualities such as heaviness, lightness, dryness, or moisture.
- **Virya (Potency)**: Assessing the substance's potency, whether it is heating or cooling.
- **Vipaka (Post-Digestive Effect)**: Determining the effect after digestion.
- **Prabhava (Specific Action)**: Exploring unique actions that cannot be explained by the other properties.

Therapeutics

Therapeutics involves the practical application of medicinal substances to treat diseases. This includes:

- **Formulation Preparation**: Creating various forms of medicine such as decoctions, powders, pills, and oils.
- **Administration**: Deciding on the appropriate method of administration based on the patient's condition and the nature of the ailment.
- **Dosha Balance**: Applying the principles of Ayurveda to balance the three doshas (Vata, Pitta, and Kapha) and enhance Agni (digestive fire).

Standardization and Quality Control

Ensuring the quality and efficacy of Ayurvedic medicines is a critical component. This involves:

- **Setting Standards**: Developing standards for raw materials, processing methods, and finished products.
- **Analytical Techniques**: Utilizing modern techniques like chromatography and spectroscopy to ensure purity and potency.
- **Microbiological Assays**: Conducting assays to ensure the safety of the medicinal substances.

Integration with Modern Science

The integration of modern scientific advancements enhances the scope and application of Aushadhi Prayoga Vigyana. This includes:

- **Advanced Analytical Techniques**: Using techniques to identify active compounds within medicinal substances.
- **Clinical Trials**: Conducting trials to validate the efficacy and safety of Ayurvedic treatments.
- **Novel Formulations**: Developing new formulations that blend Ayurvedic and modern medicinal principles.

Regulation and Ethical Practices

Regulatory frameworks ensure the safe practice of Aushadhi Prayoga Vigyana. This includes:

- **Regulatory Compliance**: Adhering to guidelines set by health authorities to ensure safety and efficacy.
- **Ethical Sourcing**: Ensuring sustainable sourcing of medicinal plants and human treatment of animals.
- **Consumer Safety**: Protecting consumers through proper labeling, dosage instructions, and warnings about potential side effects.

Research and Innovation

Ongoing research and innovation are vital for the advancement of Aushadhi Prayoga Vigyana. This involves:

- **Exploring New Medicinal Plants**: Identifying and studying new plants with potential therapeutic benefits.
- **Developing Novel Formulations**: Creating new formulations and delivery methods.
- **Mechanistic Studies**: Investigating the molecular mechanisms underlying the therapeutic effects of Ayurvedic medicines.
- **Collaborative Research**: Engaging in interdisciplinary research with modern biomedical sciences to uncover new insights and therapeutic strategies.

The scope of Aushadhi Prayoga Vigyana is broad and multifaceted, encompassing every aspect of the medicinal use of natural substances. From the identification and study of medicinal plants to

their therapeutic application and integration with modern science, this field represents a holistic approach to healthcare. By continuing to evolve and adapt to new scientific advancements, Aushadhi Prayoga Vigyana promises to make significant contributions to global health and well-being, preserving the rich heritage of Ayurveda while embracing the innovations of contemporary medicine.

Importance of Aushadhi Prayoga Vigyana

औषधं ह्यनभिज्ञातं नामरूपगुणैस्त्रिभिः ।
विज्ञातं चापि दुर्युक्तमनर्थायोपपद्यते ॥
योगादपि विषं तीक्ष्णयुक्तमं भेषजं भवेत् ।
भेषज चापि दुर्युक्तं तीक्ष्णं संपद्यते विषम् ॥
(च.सू. 1/126-127)

The proper usage of to Visha (poison), Shastra (weapon), Agni (fire) and Ashani (thunder bolt) is going to benefit and improper usage is opposite manner. In the same way proper usage of Aushadha is considered as Amruta (nectar). The usage of all these are completely depends on the user.

Even though having knowledge of drug in regard of name morphology and qualities, if the physician is not known to formulate that medicine is consider as unused knowledge and that physician is harmful to patient.

एवं प्रकृत्यादीनां विकृति वर्ज्यानां भावानां प्रवरमध्यावर विभागेन बलविशेषं विभजेत् । विकृतिबलत्रैविध्येन तु दोष बलं त्रिविधमनुमीयते । ततो भैषजस्थ तीक्ष्ण मृदुमध्य विभागेन त्रैविध्यं विभज्य यथादोषं भैषज्यमवचारयेदति ॥ (च.वि. 8/123)

The specific strength of Prakruti (constitution etc.) factors excluding Vikruti (pathogenesis) are categorized as Pravara (superior), Madhyama (medium) and Avara (inferior).

As per three degrees categories of Vikruti (pathogenesis) three degrees of strength of Doshas is inferred, subsequently the therapeutics should also be divided under three i.e. Tikshna (strong), Mrudu (mild) and Madhyama (moderate) and then according to strength of Dosha one should apply that.

Prakruti Parikshya Bhava	Vikruti	Aushadhi
Pravara	Pravara	Tikshna
Madhyama	Madhyama	Madhya
Avara	Avara	Mrudu

Note- Sharira Bala- Sharira Bala is assumed through Prakrutyadi Pariksha. Vikruti Bala- Roga Bala.

Prashasta Bheshaja Lakshana

तदेव युक्तं भैषज्यं यदारोग्याय कल्पते ।
स चैव भिषजां श्रेष्ठो रोगेभ्यो यः प्रमोच्येत् ॥
(च.सू. 1/134)

It is a Yukta Bhaishajya (good medicine) which accounts for Arogya (health). It is only he who can relieve Roga from his patients of their ailments is the best physician. Treatment always done by a Knowledgeable and well-versed physician not by a quack.

Qualities of Dravya (drug) / Aushadha Chaturguna

बहुकल्पं बहुगुणं सम्पन्नं योग्यमौषधम् ॥
(अ.ह.सू. 1/28)

- बहुकल्पं - Drug should be useful to formulate various pharmaceutical preparations like Swarasa (fresh juice), Kalka (paste), Churna (powder), Kwatha (decoction) etc. according to the choice of the patient.
- बहुगुणं – Having enormous qualities
- सम्पन्नं – Drugs should be potent
- योग्य – Suitable and appropriate for specific diseases.

बहुता तत्रयोग्यत्वमनेकविधकल्पना ।
संपच्चेति चतुष्कोऽयं द्रव्याणां गुण उच्यते ॥
(च.सू. 9/7)

- बहुता - availability in abundance- ideally the herb or the herbal medicine should be easily available world wild,
- योग्यत्व - suitability- medicine should be suitable to the particular disease,

- अनेकविधकल्पना - should be usable in different forms like Swarasa, Phanta, Hima, Churna etc. and doses (amount)
- संपत - Medicine should be so prepared that it has all the desired therapeutic qualities) the qualities of medicine.

Various dosage form according of its physical status of product

It can be grouped under 3 main groups: liquid, semi solid and solid dosage forms/kalpana.

Liquid form	Semi solid dosage from	Solid dosage form
Swarasa	Kalka	Churna
Kwatha / Kashaya	Avaleha	Rasakriya. Ghana Vati
Hima	Lepa	Khanada
Phanta	Suktha Tila	Gudapaka
Pramathya	Malahara	Guggulu
Paniya	Upanaha	Sattva
Ushnodaka		Lavana
Kshirapaka		Ayaskriti
Laksharasa		Masi
Mamsa Rasa		Kshara
Mantha		Vati
Panaka		Varti
Arka		
Sharkara		
Sneha		
Sandhana		

Liquid Dosage Forms

Swarasa (juice of drugs)- The juice extracted from the drug is known as swarasa. It is one of the basic preparations in Ayurveda and one among the Panchavidha Kashaya Kalpana and the most potent among them Example-Tulasi Swarasa. It is used as Abhavana Dravya and as Shodhana Dravya in mineral preparation. It is mainly administered in the dose of 1/2 - 1 Pala there are different methods involved in for the extraction of juice from drug and they are mainly based on nature of drugs the different method involved for extraction are pounding for soft drugs for hard drugs adding 8 times of water and reducing it to 1/4 parts and for fibrous drugs Putapaka method is adopted.

Kwatha (decoction)- It is the another basic preparation where the coarse powder form of a drug is taken and it is boiled with different ratio of water as in case of soft drugs 4 parts of water is used. In case of medium and hard drugs 8 times of water is used and in case of very hard drugs 16 of water is used in an earthen pot and it is heated on Mandagni till it is reduced to 1/8 parts of the original quantity. Example- Rasnadi Kwatha the dose of this kind of preparation is 2 palas (96ml). It can also be used for secondary preparation like preparation of medicated ghee and oil and also used as Anupana, Niruhabasti, Bhavana Dravya. There are certain Upkalpana of Kwatha like Pramathya Kalpana, Paniya Kalpana, Ushnodaka, Ksirapaka, Laksarasa, Mamsa Rasa.

Hima (cold infusion) - It is also one of the of the primary preparation mentioned in Ayurveda. One part of drug is put in 6 part of cold water and kept overnight in an earthen pot. Next day the drug is taken and macerated well and filtered through clean cloth, and the formulation thus obtained is called as the Hima Kalpana. It is also known as cold infusion. This type of preparation mainly acts as a Pitta Shamaka and Hrudya and they can also be used as an instant source of energy. Example- Dhanyaka Hima. the dose of this kind of preparation is 2 pala (96 ml) the Upkalpana of Hima are Mantha Kalpana, Udaka Kalpana, Panaka Kalpana,

Phanta (hot infusion)- It is last preparation among the Panchavidha Kashaya Kalpana. Here the coarse powder of a drug is put into hot water and it is rubbed and filtered with a cloth. By this there is softening of the drugs takes place as the extraction of all the volatile principles from the drug to water. It is considered to be the least potent among the Panchavidha Kashaya kalpana.

Arka- It is a secondary preparation which is obtained by distillation of certain liquid or drugs

soaked in water and extracted by an Arkayantra. and used in the case of Agnimandya, Amajeerna and Amatisara.

Sharkara kalpana: The medicines in the syrup form is called Sharkara. Here two parts of sugar is added to one-part of Kwatha/Swarasa/Hima is added and heated on Mandagni till it gets proper Paka and after cooling it is filtered and mainly used for children due to its sweetness and the sugar concentration in this preparation will be 66.7% due to which it also acts as a preservative. Example- Parushaka Sharkara.

Asava and Arishta- Asava and Arishta are a special kind of medicinal preparation which are made by soaking the drugs either in the powder form or in the Kashaya form in a solution of sugar or jiggery for a specific period of time for fermentation to generate alcohol. The alcohol thus generated acts as a preservative and thus facilitating the extraction of active principles contained in it. It is preserved for many years. Example Draksharista, Kanakasava

Taila/Ghruta Kalpana- Taila /Ghruta are preparations in which Taila are boiled with a prescribed Kashaya and Kalka according to the formula. This is mainly in the ratio 1:4:16.This form of medicine can be used internally as well as externally example- Triphala Ghruta, Dhanwantara Taila.

Semi Solid Dosage Forms

Kalka: It is a soft paste prepared by both wet and dry drugs prepared by grinding wet and dry drugs example- Nimba Kalka.

Avaleha Kalpana- It is another type of semi solid preparation which is prepared either by adding jiggery and/or sugar, and is boiled with a prescribed drug, decoction of drug or its juice to get a semi solid preparation known as Avaleha. Example- Kushmanda Avaleha

Rasakriya- It is also another type of semi solid preparation where the Swarasa is extracted, boiled down to thick consistency so as to obtain a semi solid preparation known as Rasakriya. It is used mainly for the bitter drugs, so it will be easier for consumption and the dosage of the drug can be minimised. Example- Daruharidra Rasakriya.

Solid dosage forms

Churna Kalpana- Churna is a powder of a single drug or a mixture of two or more drugs. Here the drugs are finely powdered and they are filtered through a cloth so that the powder is very fine which can be used internally as well as externally. This can be used for preparations like Vati, Avaleha etc.

Vati Kalpana- It is solid preparation which is prepared either by cooking the powder of a drug with jaggery, sugar or Guggulu or without cooking. Then macerating the powder with liquid like honey and Guggulu and then rolled into pill forms. This form is considered to be the most convenient form of medicine for the patient. It can also be used internally and externally and can be used for many years. Example- Bilvadi Gulika, Triphala Guggulu.

Varti Kalpana- It is similar to Vati but medicines are modified into a Yavakriti form i.e, along with tapering ends. Example- Gudavarti.

Lavana Kalpana- It is one of the solid form where the Saindhava Lavana is powdered and is combined with Arka, Narikela, and is covered and puta is given on Agni so as to obtain a black coloured Lavana .it can be preserved for many years when kept in airtight containers. Example- Narikela Lavana.

Kshara Kalpana- Ksharas are alkaline substances which are obtained from the ash of drugs. It is used both internally aswell as externally. Internally used Kshara is called Paniya Kshara and externally used Kshara is called Pratisaraneeya Kshara. It is again divided into 3 types i.e, Mrudu, Madhyama and Tikshna Kshara. It is considered to be one of the Anusastras and last indefinitely. Example-Yavakshara, Apamargakshara.

Masi Kalpana - Conversion of a drug into its carbon form by burning is called as Masi Kalpana. The drug from which Masi is prepared should be powdered and placed in a Sarava and Samputa is

prepared by placing another Sarava over the first one and sealing it. It is thus prepared by giving either Laghu Puta or Mahaputa according to the nature of the drugs involved. After the cooling of the Samputa, the prepared Masi is ground once again to obtain a homogeneous and finepowder.eg. Triphala Masi.

Factors Deciding Matra of the Medicine

1. Kala
2. Agni
3. Bala
4. Aayu
5. Prakruti
6. Desha
7. Dosha

Acharya Charaka in Siddhi Sthana, chapter 6 have said about appropriate dose of the recipe for elimination of doshas is characterized as.

- It should be small in quantity but quick in action;
- It should be able to eliminate morbid doshas in large quantity but easily;
- It should be light for digestion, palatable, pleasing and curative of the concerned disease;
- It should not cause serious complications;
- It should not cause depression in excess.
- It should possess agreeable smell, colour and taste.

Dosages of Herbal Preparations

S.No.	Kalpana name	Matra
1.	Sneha	2 karsha 2 Tola 1/2 pal
2.	Kalka	1 karsha1 tola
3.	Kwatha	2 pal
4.	Hima	2 pala
5.	Phanta	2 pala
6.	Churna	1 karsha
7.	Avleha	1 karsha (Yadav ji Trikam ji)1 pal (sharangdhar)
8.	Vati	1 karsha
9.	Kshara	2-8 ratti
10.	Aasav arishta	1 pal
11.	Tail	1 pal(abhyantar)
12.	Ghritta	1 pal

Dosages of Herbo-Mineral Preparations

S.No.	Product	Matra
1.	Parada & Swarna Bhasma	1 ratti
2.	Rajata Bhasma	3 ratti
3.	Tamra Bhasma	2 ratti
4.	Loha Bhasma	6 ratti
5.	Abraka Bhasma	6 ratti
6.	Naga Bhasma	6 ratti
7.	Vanga Bhasma	6 ratti
8.	Kapardika Bhasma	6 ratti
9.	Shilajatu Bhasma	6 ratti
10.	Mandura Bhasma	1 masa
11.	Uprasa	1 masa
12.	Kamsya Bhasma	2 ratti
13.	Pittala Bhasma	2 ratti
14.	Visha Matra:In all patients In kushtha rogi-	1yava1 ratti
15.	Vajra Bhasma	2 yava
16.	Harital Bhasma	7 yava

Dosages According to condition of child

S.No.	Age & condition of child	Matra
1.	A baby depending on stanyapana and of age morethan 1 yr	One Anguli parva
2.	A baby depending on both stanyapana and anna Dravyas	Kolasthi
3.	A baby depending only on anna Dravyas	Kola

Dosages of Formulations

S.No.	Formulation	Matra
1.	Kalka	1 aksha
2.	Kwatha	1 anjali
3.	Churna	1 vidal padak

Dosages for Child

Condition	Matra
Dose of Ghrita	
In newly born	Kolasthi
After 5 or 6 days	Slightly more
After 20 nights	Kolardha
Till one month	Kola Matra
2nd month	More than Kola
3rd month	2 kola
4th month	Shushkamlaka
5th/6th month	Ardhramlaka
7th/8th month	More than Ardramlaka
Till 8 months	1/4th quantity of drugs to that of Sneha Kalpana should be given according to disease
After 8 months	Drug mixed with water should be given

Dosages of Various Kalpana

S.No.	Condition	Matra
1.	Sneha & Kwatha • Uttama Bala • Madhyama Bala • Hina Bala	 1 Pala 3 Karsha $^1/_2$ Pala
2.	Guda & Khanda: • Uttam Bala- • Madhyam Bala- • Hina Bala-	 $1^1/_2$ Pala 1 Pala $^1/_2$ Pala
3.	Modaka	1 Karsha
4.	Vataka	1 Karsha
5.	Leha	1 Karsha
6.	Guggulu	
	• Uttama Agni Bala • Madhyam Agni Bala • Hina Agni Bala	12 Masa 8 Mas 4 Masa

Routes of Drug Administration

1. Mukha (Mouth)
2. Netra (Nose)
3. Karna (Ear)
4. Akshi (Eye)
5. Twak (Skin)
6. Guda (Rectum)
7. Mutra Marga (urethra)
8. Yoni Marga (vagina)

Aushadha Sevana Kala/ Bheshaja Kala

The time of administration of medicine is called as 'Aushadha Sevana kala'. The efficacy and safety of medicine vary as per the time of administration. Chrono-pharmacology deals with studies of biological rhythm dependencies of drugs regarding its pharmacological effects and/or pharmacokinetics/dynamics of drugs in both animals and humans.

Times of administration of medicine

1. **Empty stomach or early morning (Pratah Niranna, Abhaktam, Ananna)**- Administration of medicine early in the morning empty stomach, or during sunrise [Sha.Purva Khanda.2/2] or when the stomach is free from Kapha Dosha at the time of breakfast (7.30AM-8.30AM). [A.S.Sutra Sthana 23/14]
2. **Before food (Bhuktadau, Prabbatam, Purvabhakta, Annadau)**-The medicine is properly digested without being expelled when ingested empty stomach. It cures diseases due to the vitiation of Apana Vata and the lower part of body. It strengthens the lower part of body. This time is ideal to administer medicine for reducing weight. [A.S. Sutra Sthana 23/15] [Cha.Sa.Chikitsa Sthana30/299], [Sha. Sa.

Purva khanda 2/5] The Dosha present in the stomach (amashaya) is destroyed if medicine is given at this time. [Ka. Sa. Khila Sthana 3/44]

3. **After food (Bhuktapashchat, Adhobhaktam, Adhabhaktam, Bhuktaante)-** The medicine interacts with food present in the stomach. The medicine is mixed and circulated with the nourishing part prepared from food (Ahara Rasa) by Vyanavata. This time of administration is indicated in diseases of upper part of body as it provides strength to upper part of body. [Su.Sa.Uttara Sthana.64/72, A.S. Sutra Sthana 23/17]. It pacifies the diseases of chest, throat and head immediately. [Ka. Khila Sthana 3/47] It improves the stoutness of body. [A.S. Sutra Sthana 23/17] Medicine is given after breakfast or lunch in diseases due to vitiation of Vyana Vata. [Cha.Sa.Chikitsa Sthana 30/299, Sha. Sa. Purva khanda.2/7, A. Hr. Sutra Sthana.13/39, A.S.Sutra Sthana 23/17] Medicine is given after dinner or evening meals in diseases due to vitiation of Udana Vata.[A.Hr.Sutra Sthana 13/39, A.S.Sutra Sthana 23/17] Sharangadhara advises to give medicines after evening food to treat disorders due to Prana Vayu [Sha.Purvakhanda 02/10] and disorders of kapha dosha. [A.S.Sutra Sthana 23/17]
4. **In between food (Bhuktamadhya, Madhya Bhaktam, Madhye)-** The medicine is given to improve digestion in persons with poor digestive capacity. [Sha. Sa. Purva khanda 2/6] It improves the functions of samana vata and digestive processes. [Sha. Sa. Purva khanda 2/6, Cha.Sa.Chikitsa Sthana 30/299] [A.Hr.Sutra Sthana13/38, A.S.Sutra Sthana 23/16] This time is indicated in diseases of middle part of body. [Su.Sa.Uttara Sthana 64/72] The medicine during meals interacts with food and digestive juices in gut. It can easily move the dosha in internal organs (antaraashaya). [Ka. Sa. Khila Sthana 3/47] It cures the diseases due to pitta dosha and those related to gut.[A.S.Sutra Sthana 23/16]
5. **Before and after food (Samudgam)-** This time is best suited to give medicine to treat hiccups, tremors, and convulsions. [Sha. Purvakhanda.2/7, A.Hr. Sutra Sthana 13/41] The medicine should be given along with light meal and meal in less quantity. [A.S.Sutra Sthana 23/20, Cha.Sa.Chikitsa Sthana30/301] The time of medicine is indicated to treat dosha that has spread in upper and lower directions. [Su.Sa.Uttara Sthana64/77, Ka.Khila Sthana 3/48, A.S.Sutra Sthana23/20]
6. **Along with food (Annaihiyuktam, Sabhaktam, Saannam, Bhaktasamyuktam)** Medicines are given by mixing with variety of attractive foods. [Cha.Sa.Chikitsa Sthana 30/301] This time of medicine is used to treat anorexia [Sha. Sa. Purva khanda 2/5] and persons with good or low strength, who have aversion towards medicine, children and aged persons. [Su.Sa. Uttara Sthana.64/75] This form is also used when the patient is not willing to take essential medicines. The medicine given at this time nourishes body. It helps to protect the strength and digestive capacity. It is used to treat the diseases affecting the whole body. [A.S.Sutra Sthana.23/18] It is indicated in persons with poor digestion, ladies, delicate, wounded, and weak individuals.[Ka. Sa. Khila Sthana 3/49]
7. **Along with each morsel (Grasa, grasegrase, Sagrasam)-** Medicines at this time are indicated in disorders due to vitiation of prana vata.[Cha.Sa.Chikitsa Sthana 30/300, A.Hr.Sutra Sthana.13/39, A.S.Sutra Sthana 23/22] Aphrodisiac (Vajeekarana) medicines and those for increasing the digestive capacity are administered by adding with each morsel of food. [Ka.Khila Sthana 3/50, A.S.Sutra Sthana 23/22] Sharangadhara advises this time of medicine to treat disorders of udaanavata. [Sha.Purva Khanda 2/10]
8. **In between two morsels (Grasaantare, Kavalantare)-** This time of medicine is indicated when emetic medicine needs to be given with food. Emetic smoke inhalation is

given at this time to treat conditions of Dyspnea. [Su.Sa.Uttara Sthana 64/82] Medicines for cardiac diseases, drugs for therapeutic vomiting and medicated smoke are given at this time. [A.S.Sutra Sthana 23/22] It is also indicated in impaired voice (swarabhanga) and throat disorders. [Sha. Sa. Purva khanda 2/10] This time is indicated for diseases due to vitiation of vyana vata. [A.S.Sutra Sthana.23/19]

9. **Frequent (Muhurmuhu, Muhuhu)-** This time of medicine is used to treat recurrent bouts of diseases like morbid thirst (Trit), vomiting (Chardi), hiccups (Hikka), dyspnoea (Shwasa), cough (Kasa) and poisoning (Gara Visha). The medicines can be given with or without food. [Sha. Sa. Purva khanda 2/11, Cha.Sa.Chikitsa Sthana 30/300, Su.Sa.Uttara Sthana 64/79, Ka.Khila Sthana 3/48, A.Hr.Sutra Sthana 13/40, A.S.Sutra Sthana 23/21]
10. **Bed time at night (Nishi)-** This time is indicated to treat the diseases of head and neck. [Sha. Sa. Purva khanda 2/12, A.Hr.Sutra Sthana 13/41, A.S.Sutra Sthana 23/22] It is also indicated to treat psychiatric diseases. The medicines in different forms are given for reducing body bulk (Lekhana), nourishing (Brimhana), digestive (Pachana) and pacifying (Shamana) purpose.
11. **In between two meals (Antarabhaktam, Bhaktasyamadhyam)-** This time is indicated when the digestion of food is complete. It is indicated for those having good digestive capacity [A.S.Sutra Sthana.23/19] and persons suffering from mild diseases.[Ka. Sa. Khila Sthana 3/49] The medicine given at this time is good for heart (Hridya), gives more strength to mind (Manobalakara), increases the digestive capacity (Deepana) and wholesome (Pathya).[Su.Sa.Uttara Sthana.64/75]

Anupana

Anupana is defined as the Pana (drink) which is taken along with Ahara Dravya (food material) and Aushadhi Dravya (Medicine).

Definition- Anupana is defined as the Pana which is taken immediately after Aushadhanga (part of medicine) and Aushadhi yoga (medicine formulation). Anupana is defined as that, which enhances the properties of medicines along with it is taken.

Anupana Dravya- Several Anupana Dravya are quoted in classics like Shitala Jala (cold water), Ushna Jala (Hot water), Aasava (fermented liquids), Arishta (wines), Phalamla (alcohol prepared from fruits), Dhanyamla (alcohol prepared from grains), Ksheera (milk) and Rasa (meat soup). Rain water is considered to be the best Anupana.

Types of Anupana- On the basis of utility Anupana can be classified into two types i.e. Aharopayogi (Anupana advocated with food articles) and Aushadopayogi (anupana advocated with drugs). In the context of Rogadi varga, this Anupana is classified into two types i.e. Kramana Anupana is that which is administered in delay and Pachana Anupana is given in the night, without delaying but immediately.

Shrestha Anupana (Best Anupana)

According to Acharya Vagbhata, Jala (water) is considered as best Anupana for both healthy and diseased persons. According to Acharya Sushruta, Mahendra Jala (Rain water) is considered as best Anupana in all type of Dravya (liquid).

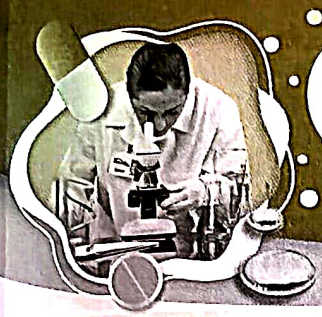
Varieties of Anupana used after food

In conditions caused by the aggravation of Vata Dosha, Snigdha (unctuous) and Ushna (hot) Anupana are useful. Similarly in Pitta Dosha, Madhura (sweet) and Shita (cold) Anupana is beneficial. In kapha Dosha, Snigdha (unctuous) and Ushna (hot) Anupana are useful. Mamsa Rasa (meat soup) is suitable in depletion of Sapta Dhatus.

Properties of Anupana- Anupana give rise to merits like-Tarpayati (bring about refreshment), Preenyati (gives pleasure), Urjayati (gives energy), Brihanyati (gives nourishment), Paryaaptima Abhinirvartayati (gives satisfaction), Bhukat Amvasadayati (brings Steadiness in food

consumed), Annasanghatbhinnati (helps in breakdown of food particles in the abdomen),

Mardavmapadayati (soften the food), Klaedayati (brings the unctuousness of food), Jaryati (helps in digestion process), Sukha Parinamyati (helps in proper assimilation), Ashu Vyavayati (helps in instant diffusion of the food taken), Aharsya Upajanyati (supply the food to the tissues), Rochana (improves the taste), Vrishya (improves the potency), Shramhar (relieve fatigue), Dipaniya (act as appetizer), Doshashaman (alleviates three doshas), Pipasachchedana (quenches thirst), Varnakara (improve complexion) and Truptikara (gives satisfaction).



CHAPT. 2

Single drug (Herbal & Mineral)

Syllabus

Single drug its variety of formulations and their different indications, Chemical/phytochemical composition, Pharmacodynamics and pharmacokinetics as per formulation, Therapeutic properties, Awasthanusara Uses (as applicable), Matra, Anupana, Pathyapathya, Sevana Kala, Kala maryada (duration of medication as applicable), Side effects of medication (as applicable) and Research updates and clinical evidences for each of the following formulations

Guduchi-

- Guduchi Swarasa (Sha.Sam.Ma. Kh. Cha. 1/7 page 138)
- Guduchyadi Churna (B.R. Pleehayakrut Rogdhikara)
- Guduchi Kwatha (B.R. Jwaradhikara)
- Guduchi Hima (B.R. Chardi Rogadhikara)
- Guduchi Ghana- Samshamani Vati (AFI Part II Page 183)
- Guduchi Satva (AFI-Part I, Page 205)
- Amrutadi Guggulu (AFI-Part III, Page 107)
- Amritarishta (AFI Part I page 6)

Amalaki-

- Amalaki Swarasa (Sha.Sam.Ma.Kha.)
- Amalakyadi Churna (Sha.Sam.M.Kha. Churna kalpana)
- Triphala Rasayana (Cha.Chi. Rasayana Adhyaya)
- Chyavanaprasha (AFI Part I page 37)
- Dhatri Lauha (AFI Part I Page 284)
- Amalakyadi Gutika (Sha.Sam.Ma.Kha.Vati Kalpana)
- Phalatrikadi Kwatha (Sha.Sam.Ma.Kha.Kwatha Kalpana)
- Triphala Ghrita (Sha.Sam.Ma.Kha. Ghrita Kalpana)

Bhallataka

- Bhallataka Modaka (B.R. Pleeha-Yakrit Rogadhikara)
- Bhallataka Ghrita (B.R. Gulma Rogadhikara)
- Bhallataka Guda (B.R. Arsha Rogadhikara)
- Bhallatakadi Taila (B.R. Nadivrina Rogadhikara
- Bhallataka Avaleha (B.R. Arsha Rogadhikara)
- Bhallatakadi Lepa (B.R. Kushta Rogadhikara)
- Bhallatakadi Kwatha (B.R. Urusthabha Rogadhikara)

Note: For Bhallataka additional ashuddha, avidhi sevanajanya vyadhi and their shantyupaya

Gandhaka

- Gandhaka churna (SY page 217)
- Gandhaka Rasayana (AFI-Part II, Page 115)
- Gandhaka Druti (RRR 3rd Chapter)

- Gandhaka Taila (R.T. 8th Chapter)
- Gandhakadya Malahara (AFI-Part II, Page 165)
- Gandhakadi Lepa (RRS Shiroroga Chikitsa)
- Gandhaka Vati (B.R. Agnimandya Rogadhikara)

Gairika

- Gairika Pradeha (Cha.Chi. Visarpa Rogadhyaya
- Laghusuta shekhara Rasa (AFI Part II Page 282)
- Gairikadya Malahara (AFI-Part III, Page 224)
- Gairikadya Gutikanjana (B.R. Netraroga)
- Gairika rasakriya (Cha.Chi.26/235)
- Varnakara lepa (Cha.Chi.25/117)

Learning objectives

1. Describe different dosage forms prepared out of a single herb or mineral
2. Appreciate how the therapeutic efficacy varies depending on the dosage form
3. Describe therapeutic efficacy of different formulations of Visha Dravya (Bhallataka), with its toxic effects and remedy.
4. Describe therapeutic efficacy of different formulations of Guduchi, Gairika, Gandhaka.
5. Appraise multiple factors considered for preparation of various dosage forms from a single drug and create list of more such examples.

Total - 10 hours (Lecture :08 hour, Non-lecture: 02 hours)
Marks- 10 marks, MCQ- Yes, SAQ (5 Marks)- Yes and LAQ (10 Marks)- Yes

Guduchi

Chemical/phytochemical composition- Stem and root part of T. cordifolia contain alkaloids as active constituents. These are tembetarine, choline, magnoflorine, berberine, tinosporin, isocolumbin, palmetine, jatrorrhizine, aporphine alkaloids, tetrahy- dropalmatine which showed anti-cancer, anti-diabetes, anti-viral, anti- inflammatory, anti-psychiatric and immunomodulatory action.

Terpenoids– Tinosporide, Furanolactone diterpene, Furanolactone clerodane diterpene, furanoid diterpene 28 , Tinosporaside, ecdysterone makisterone and several glucosides isolated as poly acetate, phenylpropene disaccharides cordifolioside A, B and C, cordifoliside D and E, Tinocordioside, cordioside, palmatosides C and F, Sesquiterpene glucoside tinocordifolioside, Sesquiterpene tinocordifolin.

Alkaloids– Tinosporine (S), Mangoflorine (S), Tembetarine (S), Berberine(S), Choline(S), Palmatine(S), Jatrorrhizine (S), 1,2-Substituted pyrrolidine (S), Alkaloids, viz. jatrorrhizine, palmatine, beberine, tembeterine, choline.

Lignaus– 3 (Alpha, 4-dihydroxy-3-methoxy-benzyl)-4-(4-hydroxy-3-methoxybenzyl) (S)

Steroids– Giloinsterol, (S), B-Sitosterol, (S) 20í- Hydroxy ecdysone, (S) etc.

Others– Giloin, Giloinin, Tinosproic acid, Tinosponone, Cardifolone Heptacosanol, (S), Cordifolone, (S) Octacosanol, (S) Tinosponone, tinosporal, tinosporon, 20-hydroxyecdysone, two phytoecdysones.

Guduchi Swarasa (Sha. Sam. Ma. Kh. Chp1/7 Page 138)

Pharmacodynamics and pharmacokinetics as per formulation

अमृताया रसः क्षौद्रयुक्तः सर्वप्रमेहजित्।
(शा.म. 1/7)

The Swarasa of Amruta along with Kshaudra (Madhu) cures all kinds of Prameha.

Rasa Panchaka-

Rasa	-	Tikta
Guna	-	Guru
Virya	-	Ushna
Vipaka	-	Madhura

Therapeutic properties and Awasthanusara Uses- Vatahara, Amahara, Sangrahi, Hridya, Balya, Medhya, Vatapittahara, Mefohara, Dipaniya, Rasayani, Vayasthapaniya, Kamalahara, Pramehahara, Kandughna, Visarpahara, Kasahara, Dahaprashamana, Krimighna, Chardhighna, Panduhara, Jwarahara.

Matra- Ardha Pala (2 Tola- 20ml)

Anupana- Madhu (honey)

Pathyapathya- According to Roga (disease)

Sevana Kala- Pratakala (morning)

Research updates and clinical evidences

- Pre-clinical studies done of Guduchi shows that it has Anti-cancer/anti-tumour activity, Anti diabetic and hyperglycaemic activity, Anti-inflammatory activity and clinical studies show that it has important role in normalizing of altered liver function.
- **Clinical evidence–** Clinical trial done on 30 children of age group 6-8 years were administered to evaluate efficacy of Guduchi juice to evaluate the growth of children by comparing it with standard growth chart developed by National centre for Health Statistics. The result of this study shows that juice of Guduchi is an effective, and safe for children growth. Reference- Patil YR. An Open Label Clinical Study to Evaluate effect of Juice of Tinospora Cardifolia Linn. On Growth of Children. IJRAP 3 (1), Jan-Feb 2012, pp 77-79.

Guduchyadi Churna (B.R. Pleehayakrut Rogdhikara)

गुडुच्यतिविषा शुण्ठी भूनिम्बयवतिक्तकम्।
मुस्ताकणा यवक्षारः कासीसं भ्रमरातिथिः॥
एतेषां समभागेन चूर्णमेव विनिक्षियेत्।
यकृत्प्लीहपाण्डुरोगमग्निमान्द्यरोचकम्॥
ज्वरमष्टविधं हन्ति साध्यासाध्यमथापि वा।
नानादोषोद्भवञ्चैव वारिदोषभवं तथा॥
विरुद्ध भेषजभवं ज्वरमाशु व्यपोहति॥
(भै.र. प्लीहायकृतरोगा, 12-14)

Ingredients and process of making- Powdered Guduchi, Ativisha, Shunthi, Bhunimba, Kirata Tiktakam, Musta, Kana (Pippali), Yavakshara, Kasisa, bark of Champaka in equal quantity.

Matra and Anupana – Daily take 3 grams of this Churna with lukewarm water.

Therapeutic benefits- Yakrut Pleeha Roga (alleviating enlargement of liver and spleen), Pandu Roga (anaemia), Agnimandya (loss of appetite), Arochaka (anorexia), Ashta Jwara (eight types of fever), various types of difficult and simple cases of fever, fever caused due to vitiation of water and consuming Viruddha Ahara (incompatible foods).

Pathyapathya

Pathya- Langhana, Rakta Shali, Yava, Lashuna, Haritaki, Laghu Tikta Dravya Sevana.

Apatya- Dhumapana, Divaswapna, Ushna, Lavana Yukta Ahara.

Research update and clinical evidence

Clinical study done by Prakash S & Rain NP on 20 patients in the treatment of infective hepatitis shows that Guduchi has an important role in relieving the symptoms as well as normalization of altered liver function test. The drug was given for four weeks orally with fresh water.

Guduchi Kwatha (B.R. Jwaradhikara)

पिप्पली चूर्ण संयुक्तः क्वाथरिद्दन्नरुहोद्भवः ।
जीर्णज्वर कफध्वंसी.....॥
(भै.र.ज्वर. 420)

Ingredients- Guduchi Swarasa and Pippali Churna

Indication- Jwara

Matra- 50 ml

Anupana- Pippali Churna

Research update & Clinical evidence

- Guduchi Kwatha shows the presence of saponin, glycosides, protein and carbohydrates (Starch).

  Ref-Verma A, Janani H. Yadav S, Galib, Prajapati PK. Pharmaceutical and Analytical Studies on Guduchi Kwatha prepared by varying properties of Water. J. Ayu Herb Med 2016; 2 (4):125-130.
- Guduchi and Pippali decoction in a dose of 100 ml were given to treat the mild to moderate cases of Covid 19 and it was observed decoction reduced that the duration of hospital stay and improved recovery period better than the standard of care treatment group.

  Ref- Kataria, S. Sharma P, Ram JP, Deswal V, Singh M, Rana R, Tehran W (2022). A pilot clinical study of an add on Ayurvedic formulation containing Tinospora Cardifolia and Piper longum in mild to moderate Covid-19. Journal of Ayurved and Integrative Medicine, 13(2), 100454.

Guduchi Hima (B.R. Chardi Rogadhikara)

कृतं गुडूच्या विधिवत् कषायं हिम संज्ञितम् ।
तिसृष्वपि भवेत्पथ्यं माक्षिकेण समायुतम् ॥
(भै.र.छर्दि. 16)

Ingredients and method of preparation- Taking the Hima of Guduchi with Makshika (honey) is another remedy of Chardi (vomiting) caused by the any of the three Dosha.

Matra and Anupana- 50 ml with Makshika (honey)

Sevana Kala- Muhurmuhu

Pathyapathya

Pathya- Lajamanda, Purana or Shastika Shali, Yava, Godhuma, Madhu, Mamsa Rasa, Langhana, Snana, Amara, Badara etc.

Apathya- Nasya, Basti, Bhaya, Udvega, Viruddha Anna, Dantadhavana, Vyayama etc.

Research update

- Hima and Swarasa of Tinospora cordifolia contains alkaloids, flavinoids, saponin, steroids, triterpenoids, phenolics and tonins. Ref-Kaushik A, Husain A, Awashthi H, Singh DP, Khan R, Mani D. Antioxident and hepato protective potential of Swarasa and Hima extracts of Tinospora cordifolia and Boerhavia diffusa in Swiss albinomice. Phcog Mag. 2017;13:S658-62.
- **Clinical evidence–** Guduchi Sheet Kashaya has statistically significant result (P<0.001) in the management of Garbhini Chhardi. The study was done in 40 patients diagnosed with Garbhini Chhardi.

  Ref- Manisha Gupta et al. A clinical study to evaluate the efficacy of Guduchi sheeta kashaya in the management of Garbhini chhardi. Deptt. of Post Graduate Studies in Prasooti Tantra Evam Stree Roga, SKAMCH and RC, Vijaynagar, Bengalaru 2015-2018.

Guduchi Ghana- Samshamani Vati (AFI Part II Page 183)

Ingredients-

Guduchi	-	1 part
Water	-	4 part

Method of preparation- One part of Guduchi add 4-part water reduce up to one part.

Matra- 250mg, 500mg

Indication- Jwara, Pandu Roga

Sevana Kala- 3-4 times according Roga and Rogi Bala

Research update & Clinical evidence

- Baghel DS et al. Standardization and comparative. Study of Guduchi churna, Guduchi Ghan vati and Guduchi sata think India Journal Vol. 22 issue 17 sep 2019 pp 509-519.
- Study done by CCRAS, ministry of AYUSH in containment zones of Hamirpur, Himachal Pradesh in the prevention of COVID-19. In this study Guduchi Ghana Vati was administered in a dose of 500 mg on empty stomach for 30 days in total 1165 participants (Aged 18-60 years). It was observed that the incidences of COVID + ve cases was only 0.1%. Guduchi Ghan Vati was found to be safe and effective as a prophylactic measure in preservation of infection (Technical Dossier on Guduchi Tinospora Cardifolia, Ministry of Ayush, Government of India, First edition 2022 ISBN-978-84-950261-0-0.

Guduchi Satva (AFI-Part I, Page 205)

गुडुची खण्डशः कृत्वा कुट्टयित्वा सुमर्दयेत्।
वस्त्रेण विधृतं तोयं दाावयेत्तच्छनैः शनैः॥
शुद्धशङ्खनिभं चूर्णमेतैः संमिश्रयेदिभषक।
(यो.र.राज. 1-11/2)

Phytochemical composition– Alkaloids, flavinoids and carbohydrates are present in Guduchi Satva. Compounds like oleic acid, Tricosanoic acid, campesterol etc. are identified in Guduchi Satva.

Ingredients- Guduchi- 1 part and water- 4 part

Method of Preparation- Guduchi Satva is commonly obtained from its fresh stem, subsequent to cutting them in to small pieces and smashing them well and putting in to 4 times of water of the stem weight followed by through maceration and keeping it undisturbed for 12 hrs followed by removal of excess water and collection of the sediment portion. There are two references for the drying of collected Satva such as dried under shade and under direct sun.

Guna (Properties)- Guduchi Satva is Shweta, Subhra Ghanda Nibham (white)in color, Swadu (sweet) with slight Tikta (bitter)in taste, and it possesses Shita, Laghu, Guna (properties) and Shita Virya (cold potency).

Indication - Prameha, Shukramehaghna, Rajayakshma, Raktatisara, Raktapitta, Sushka Pandu Amavata, Kamala, Hridaroga, Jeerna Jwara, Vataodara, Bahu Mutra and Pradara.

Matra- There are different opinions about the dose of Guduchi Satva. It varies from 2 to 4 Ratti (250–500 mg), 5 to 15 Ratti (625 mg–1.8 g), 4 Ratti to 1 Masha (500 mg–1 g), and 2 Masha (2 g).

Sevana Kala- morning and night

Anupana- Madhu and Ksheera are recommended as Anupana for Guduchi Satva.

Pathyapathya- Jwara Varnita Pathya Apathya should be follow.

Research update & Clinical evidence

- Study done to see the effect of seasonal variation in yield of Guduchi Satva shows that maximum yield of Satva was obtained in Shishita Ritu while minimum in Grishma Ritu.

  Ref- Sharma R. Amin H. RG. Prajapati PK, Seasonal variations in the physicochemical profile of Guduchi Satva (Starchy substance from Tinospora Cordifolia (Wild) Miers, J. Ayurveda Indegr Med 2013;4:193-7.
- Clinical study done on Guduchi Satva in fifty patients (age 30-70 years) to evaluate its effect Diabetes Miletus. In this study 1 gm of Guduchi Satva was given orally for 50 days with plane water and it was found that Guduchi Satva has definite hypoglycaemic effect being more effective on fasting glucose level than post prandial glucose along with diet and exercise.

  Ref- Kundu Sumar, Ghosh Sukumar, Khatun Hazena. A clinical study on Guduchi Sattva (Starch obtained from stem of Tinospora Cordifolia) in Madhumeha W.S.R. To

Diabetes Mellitus Type 11. International Journal of Ayurveda and Pharma Research. 2016:4(6):32-37.

Amrutadi Guggulu (AFI-Part III, Page 107)

त्रिप्रस्थममृतायाश्च प्रस्थमेकन्तु गुग्गुलोः।
प्रत्येक त्रिफला प्रस्थं वर्षाभ् प्रस्थमेव च॥
सर्वमेकत्र सङ्कुट्य साधयेन्नल्वणेऽम्भसि।
पुनः पचेत्पादशेषं यावत्सान्द्रत्वमागतम्॥
दन्ती चित्रकमूलानां कणाविश्च फलत्रिकम्।
गुडुचीत्वाविड्ङ्गानां प्रत्येकार्द्धपलं मतम्॥
त्रिवृता कर्षमेकन्तु सर्वमेकत्र चूर्मयेत्।
सिद्धे चोष्णे क्षिपेत्तत्र अमृता गुग्गुलु परम्॥
अतो यथाबलं खादेदम्लपित्ती विशेषतः।
वातरक्तं तथा कुष्ठं गुदजान्यग्निसादम्॥

(भै.र. वातरक्तचिकित्सा 90)

Ingredients-

Guduchi	-	3 Prastha (2304gm)
Guggulu	-	1 Prastha (768 gm)
Triphala	-	1 Prastha (768 gm)
Punarnava	-	1 Prastha (768 gm)
Water	-	16 Prastha (12288 ml)

Churna Dravya-

Dantimula	-	24 gm
Chitrakamula	-	24 gm
Pippali	-	24 gm
Shunthi	-	24 gm
Triphala	-	24 gm
Guduchi	-	24 gm
Twaka	-	24 gm
Vidanga	-	24 gm
Trivruta	-	24 gm

Method of preparation- Prepare the Kwatha of Kwatha Dravya reduced to quarter by boiling. Then it should be filtered and mixed with Shuddha Guggulu and reheat it till it attains solid consistency. The add fine powder of rest of the ingredients by trituration. Prepare its pills of one grams by weight uniformly and dry them in shade. On drying these stores in glass bottles. This preparation is known as Amruta Guggulu.

Matra- one pills twice daily

Anupana- Acc. to disease condition

Indication- Amlapitta, Vatarakta, all types of Kushta, Arsha, Agnimandya, Dushta Vrana, Prameha, Amavata, Bhagandara, Nadivata and Adhyavata.

Amritarishta (AFI Part I page 6)

अमृतायाः पलशतं दशमूल्यास्तथैव च।
पादावशिष्टं पक्त्वा च चतुर्द्रोणे जले भिषक्॥
गुडस्य त्रितुलाः सिद्धे क्वाथे शीते क्षिपेत्पुनः।
अजाज्याः षोडश पलं द्विपलं रक्तपुष्पकम्॥
सप्तदृदं तथा व्योषं नागकेशरमब्दकम्।
कद्वी प्रतिविषे वत्सबीजञ्च पलसामितम्॥
एकीकृत्यक्षिपेद् भाण्डेनिदध्यान्मासमात्रकम।
अमृतारिष्टइत्येषप्रोक्तो ज्वरकुलान्तकृत्॥

(भै.र.ज्वर. 690-692)

Ingredient–

Kwatha Dravya-

Guduchi	-	4.8 gm
Dashamula	-	4.8 gm
Water	-	49.152 gm
Guda	-	14.400 gm

Prakshepa Dravya-

Shweta Jeera	-	768 gm
Parpataka	-	96gm
Saptaparna	-	48gm
Shunthi	-	48gm
Maricha	-	48gm
Pippali	-	48gm
Nagakeshara	-	48gm
Musta	-	48gm
Katuka	-	48gm
Ativisha	-	48gm
Indrayava	-	48gm

Method of preparation- Prepare the Kwatha of Kwatha Dravya reduced to quarter by boiling.

Add Sandhana Dravyas to it. Then prepare the Churna of Churna Dravya and mixed to Kwatha taken in an earthen vessel and kept undisturbed for fermentation process for the period of one month. On completion of fermentation process it should be filtered and packed in glass bottles and sealed properly. This preparation is known as Amritarishta and it cures all types of fevers.

Matra- 12-24 gm

Anupana- water

Sevanakala- Bhojanottara

Research update and Clinical evidence

- Gallic acid found in Amritaristha possesses anti-cancer, antioxidant, antiviral, antibacterial and anti-cholesterol activity while Tannic acid is used against CNS disorder, hyperglycaemia and hyperlipidemia. Ref- Sharma et.al Identification of the Amritarishta constituents, Indian J. Tradit knwo. Vol. 21 (4) Oct 2022 pp 754-759.
- Aqueous extract of Tinospora cordifolia possesses, anti-inflammatory effect so it can be used for the treatment of Jwara. Dashamoola is also having anti-inflammatory effect Amritarishta is indicated in the treatment of Jwara in Ayurveda.

Amalaki

Phytochemical composition- Amalaki fruits are moisture 81.2%, protein 0.5%, fat 0.1%, carbohydrates 14.1%, mineral matter 0.7%, fiber 3.4%, Ca 0.05%, K 0.02%, Fe 1.2 mg/100g, nicotinic acid 0.2 mg/g, phyllemblin, phyllemblic acid, gallic acid, emblicol, quercetin, hydroxymethyl furfural, ellagic acid, pectin, putranjivan A, two new hydrolysable tannins called emblicannin A and B, punigluconin and pendunculagin.

Amalaki Swarasa (Sha.Sam.Ma.Kha.)

हरिद्रा चूर्ण युक्तो वा रसो धात्र्याः समक्षिकः ॥

(शा.म. 1/7)

The juice of Dhatri (Amalaki) mixed with powder of Haridra or Makshika (honey).

Pharmacodynamics and Pharmacokinetics

Rasa - Amla Rasa Pradhana Pancha Rasa (Lavana Varja)

Guna - Ruksha, Laghu, Sara

Virya - Shita

Vipaka - Madhura

Karma - Tridoshahara

Therapeutic Use- Prameḥaghna

Matra- Ardha Pala (depend on Roga and Rogi)

Anupana- Haridra Churna or Makshika (honey)

Pathyapathya-

Pathya- Jangala Pashu Mamsa Rasa, Yava, Mudga, Tikta Shaka, Truna Dhanya,

Apathya- Dadhi, Nava Annapana, Guda etc.

Sevanakala- Pratakala and Sayakala Bhojana Purva (before food morning and evening)

Research update

Amalaki has Anti-ageing, Cytoprotective, Anti-inflammatory, Antipyretic, Antidiabetic, Antioxidant, Neuroprotective, Hepatoprotective and Immunomodulator activity. Ref- Bhat PM et al. Amalaki: A review on functional and pharmacological properties. Journal of pharmacognosy and phytochemistry. 2019; 8(3)4378-4382

Clinical evidence

Amalaki Rasayana (Amalaki Swarasa Bhavita Amalaki Churna) 89 per day and Haridra powder 16 gm in four divided dos for 60 days were given in 14 diabetic patients. Result shows statistically significant decrease ($P<0.05$) in fasting blood sugar on 45 days while highly significant on 60 days. Ref- SK Mishra et al. Effect of Amalaki Haridra on Madhumeha, Nagarjuna, January 1983;105-107.

Amalakyadi Churna (Sha. Sam. M. Kha. Churna Kalpana)

आमलं चित्रकं पथ्या पिप्पली सैन्धवस्तथा।
चूर्णितोऽयं गणो ज्ञेयः सर्वज्वर विनाशनः॥
भेदी रुचिकरः श्लेष्मजिता दीपनपाचनः।
(शा.म. 6/7)

Ingredients-

Amalaki	-	1 part
Chitraka	-	1 part
Haritaki	-	1 part
Pippali	-	1 part
Saindhava Lavana	-	1 part

Method of preparation- Mix all the ingredient homogeneously.

Therapeutic uses- Sarva Jwara Nashaka, Bhedana, Ruchikara, Shleshmahara, Dipana and Pachana.

Matra- 3-6 gms

Anupana- Jala

Research updates

- The phytochemical analysis clearly indicated the presence of alkaloids, phenols, tannins, flavonoids, steroids and saponins. Perhaps the combined effect of these principal chemical groups synergistically exhibited the antitumor activity and also provides evidence, that these compounds responsible for the folk anticancer uses of this plant. The different doses of Amalakyadi churna extract showed potent antitumor activity by increase in the life span, as well as median survival time and also reduction in the total body weight of the tumerous mice.

  Ref- Reddy BU. Antitumor effect of amalakyadi churna on eac tumor bearing mice: a preliminary study. Pharmacologyonline. 2010;1:599-606.
- Literary review revealed that Dhatryadichurna is a compoundpolyherbal preparation containing Katu tikta Lavan rasa, Madhura Vipaka, Sheeta Veerya and Laghu, Ruksha, Snigdha and Tikshnaguna. Pharmacological properties and experimental studies conducted on individual drugs proved that Dhatryadichurna can be apotent antipyretic poly herbal formulation and useful for treating jvara safely.
- Ref- Shelke S, Rathi B. Review on dhatryadi churna: An ayurvedic antipyretic polyherbal formulation. Indian Journal of Forensic Medicine & Toxicology. 2020 Oct 1;14(4):6968-72.

Triphala Rasayana (Cha.Chi. Rasayana Adhyaya)

जरणान्तेऽभयामेकां प्राग्भुक्ताद द्वे विभीतके।
भुक्त्वा तु मधुसर्पिभ्यां चत्वार्यामलकानि च॥
प्रयोजयन् समामेक्तां त्रिफलाया रसायनम्।
जीवद् वर्षशतं पूर्णमजरोऽव्याधिरेव च॥
(च.चि. 1/3/41-42)

Ingredients-

Haritaki	-	1 Part
Bibhitaki	-	2 Part
Amalaki	-	4 Part

Mode administration- Administration one Abhaya (Haritaki Churna) in the morning after confirming that previous meal got digested, before meals two Bhibhitaki and after meal three Amalaki along with Madhu and Sarpi.

Anupana- Madhu (honey) + Ghrita (ghee)

Duration- One year

Benefits- This Rasayana promotes lives for one hundred years free from Jara (old age) and Vyadhi (diseases).

Research update

Clinical evidence– Clinical study done on Triphala Rasayan in 30 patients shows that it is effective in reducing the Shonita Abhishyanda by lowering the level of Triglycerides, Total cholesteral, VLDL and increasing the level of HDL. The obtained data were statistically

significant with P<0.001. Ref- Dr. Swathi et.al. An open clinical study on Triphala Rasayana evaluating. Its effect on Shonita Abhishyanda (Hypolipidemia) JETIR Aug 2021, Vol 8 issue 8 pp 585-591.

Chyavanaprasha (AFI Part I page 37)

बिल्वोऽग्निमन्थः श्योनाकः काश्मर्यः पाटलिर्बला ।
पर्ण्यश्चतदाः पिप्पल्यः श्वदंष्ट्रा बृहतीद्वयम् ॥
शृङ्गी तामलकी द्राक्षा जीवन्ती पुष्करागुरु ।
अभया चामृता ऋद्धिर्जीविकर्षभकौ शटी ॥
मुस्तं पुनर्नवा मेदा सैला चन्दनमुत्पलम् ।
विदारी वृषमूलानि काकोली काकनासिका ॥
एषां पलोन्मितान् भागाञ्छतान्यामलकस्य च ।
पञ्च दद्यात्तदैकध्यं जलद्रोणे विपाचयेत् ॥
ज्ञात्वा गतरसान्येतान्यौषधान्यथ तं रसम् ।
तच्चामलकमुद्धृत्य निष्कुलं तैलसर्पिषोः ॥
पलद्वादशके भृष्ट्वा दत्त्वा चार्धतुलां भिषक् ।
मत्स्यण्डिकायाः पूताया लेहवत्साधु साधयेत् ॥
षट्पलं मधुनश्चात्र सिद्धशीते प्रदापयेत् ।
चतुष्पलं तुगाक्षीर्याः पिप्पलीद्विपलं तथा ॥
पलमेकं निदध्याच्च त्वगेलापत्रकेशरात् ।
इत्ययं च्यवनप्राशः परमुक्तो रसायनः ॥
कासश्वासहरश्चैव विशेषेणोपदिश्यते ।
क्षीणक्षतानां वृद्धानां बालानां चाङ्गवर्धनः ॥
स्वरक्षयमुरोरोगं हृद्रोगं वातशोणितम् ।
पिपासां मूत्रशुक्रस्थान् दोषांश्चाप्यपकर्षति ॥
अस्य मात्रां प्रयुञ्जीत योपरून्ध्यान्न भोजनम् ।
अस्य प्रयोगाच्च्यवनः सुवृद्धोऽभूत् पुनर्युवा ॥
मेधां स्मृतिं कान्तिमनामयत्वमायुःप्रकर्षं बलमिन्द्रियाणाम् ।
स्त्रीषु प्रहर्षं परमग्निवृद्धिं वर्णप्रसादं पवनानुलोम्यम् ॥
रसायनस्यास्य नरः प्रयोगाल्लभेत जीर्णोऽपि कुटीप्रवेशात् ।
जराकृतं रूपमपास्य सर्वं बिभर्ति रूपं नवयौवनस्य ॥
(च.चि. 1/1/62-74)

Ingredients and method of preparation- Kwatha Dravya (33 Drugs) one Pala (48 gms) each of Bilwa, Agnimantha, Shyonaka, Kashmarya, Patala, Bala, four leaved herbs (Shalaparni, Prishniparni, Mudgaparni, Masaparni), Pippali, Shvadamshtra, Brihati, Kantakari, Karkatshringi, Tamalaki/Bhumyamalaki, Draksha, Jivanti, Pushkaramula, Aguru, Abhaya, Amrita Riddhi, Jivaka, Rishabhaka, Shati, Musta, Punarnava, Meda, Ela, Chandana, Utpala, Vidari, Vrusha (roots), Kakoli and Kakanasa (Nasaphala/ Kakatundaka) and 500 fruits of Amalaki. All these drugs together boiled in 1 Drona (12.288 Liters) of water, when it is fully boiled, the decoction and the fruits of Amalaki made into Potali and Swedana is done.

The fruits of Amalaki after the removal of seeds to be fried in 12 Pala (567 gm), of each of Ghrita (ghee) and Tila Taila (sesame oil). (6 Pala of Ghrita and 6 Pala of Taila)

{Drugs+ Drava Dravya—boiled and reduced into 1/4th part}

This is added to the decoction, paste along with half Tula (2.400 kg) of sugar candy (Matsyandika/ Khanda Samhati), boiled with the decoction earlier obtained, until it takes the consistency of a Lehya (linctus-semi solid).

When it has cooled down, the following ingredients are added and stirred well.

6 Pala (288 gm) of Madhu (honey), 4 Pala (192 gm) of Tugaksiri, 2 Pala (96 gm) of Pippali, 1 Pala (48 gm) of each of Twak (Cinnamon), Ela (Cardamom), Patra (Cinnamon leaves), Keshara (Nagakeshara). This preparation is famous Chyavanaprasha Rasayana.

Benefits- Paramukto Sreshta Rasayana – best rejuvenators and anti-ageing medicine.

Indication-

1. Kasa – Cough
2. Shwasa – Asthma, respiratory disorders involving difficulty in breathing
3. Kshataksheena – Chest injury
4. Vruddhana Balanam Anga Vardhana- It is good for tissue growth and development of elderly and children.
5. Svarakshaya – Voice problems
6. Uroroga – Chest disorders
7. Hrudroga – Cardiac disorders
8. Vatashonita – Gout
9. Pipasa – excessive thirst

10. Mutradosha – Urinary tract disorders
11. Shukra Dosha – semen, sperm anomalies

The dose should be such that it does not disturb the digestion of meals. By the use of this medicine, Chyavana sage who was very old became young once again after consumption of Rasayana.

Administration of this rejuvenation medicine promotes Medha (intelligence), Smruti (memory), Kanti (lustre), Anamayatva (free from diseases), Ayu (healthy long life), Indriya Bala (strength of sense organs), Agni (digestion strength), Varna (skin complexion), Pavana Anuloma (movement of Vata Dosha in its normal direction and easy bowel movement). By using this therapy according to Kuti Praveshika method (while residing in a cottage), even an old man can shed all his aging related problems and emerge with fresh youthful complexion.

Matra-

अस्य मात्रां प्रयुञ्जीत योपरून्धयान्न भोजनम् ।
(च.चि. 1/1)

Matra - One Tola

Anupana- Godugdha

Sevanakala- Before food morning and evening

Research update

Clinical evidence in the clinical study done on 627 children (5-12 years age) were given Chavyanprash in the dose of 6 g. Capprox) followed by a cup of milk (100-200 ml) for 6 month showed more than 2 times protection from immunity related illness as compared to control. It also showed better percentage of improvement in energy levels, physical fitness, struggle stamine and quality of life assessed through K10 SCREEN QOL-27 questionnaries in children. Ref- Gupta A, Kumar S, Doles, Despande 5, Deshpande V, Singh S, Sasibhusan V. Evaluation of Chavanaprasa on Health and Immunity related Parameters in Healthy Children. A two Arm, Randomized, Open labelled, Prospective, Multicenter, Clinical study. Anc. Sci life. 2017 Jan-Mar; 36(3):141-150.

The properties or beneficial effects of Rasayana mentioned in the classics can be correlated with Adaptogenic property. These Adaptogens normalize body functions, strengthen systems, promote homeostasis, and have a protective effect against a wide variety of cellular stress. As described by enlightened sages in classical Ayurveda, the functional exercise capacity, physical, psychological, social, and environmental aspects as mentioned in the WHO QOL has been improved with Chyavanaprasha. It can be concluded that "Chyavanaprasha" is very much effective in improving the QOL, functional exercise capacity, and other physiologic activities in terms of Ahara Shakti (Appetite) and Vyayama Shakti (Exercise) of the apparently healthy elderly participants due to Vayashtapana (age-stabilizing) property of Chyavanaprasha. Ref- Srinivas P, Giri S, Marlewar S, Devi KP, Kumar K, Reddy RG, Sharma BS, Khanduri S, Rana R, Singhal R, Srikanth N. Clinical Efficacy and Safety of Chyavanaprasha on Aging in Apparently Healthy Elderly Subjects: A Prospective, Open-label, Multicenter Study. Journal of Research in Ayurvedic Sciences. 2017 Apr 1;1(2):81-9.

Dhatri Lauha (AFI Part I Page 284)

धात्रीचूर्ण स्याष्टौ पलानि चत्वारि लौहचूर्णस्य ।
यष्टीमधुकरजश्च द्विपलं दद्यात् पटे घृष्टम् ॥
अमृता क्वाथेनैतच्चूर्णं भाव्यञ्च सप्ताहम् ।
चण्डातयेषु शुष्कं भूयः पिष्ट्वा नवे घटे स्थायम् ॥
घृतेन मधुना संयुक्तं भक्तादौ मध्यतस्तथान्ते च ।
(भै.र.शूल. 142-1431/2)

Ingredients-

Dhatri (Amalaki)	- 384 gm
Lauha Churna Bhasma	- 192 gm
Yashtimadhu	- 96 gm
Guduchi Kwatha	- for Bhavana

Method of preparation- Mix all the ingredients by triturating in Khalva yantra. Then it should be subjected to Bhavana with Guduchi Kwatha for seven days. Then it should be kept in

the intense sun heat and dried and again triturated in Khalva yantra and stored in glass bottles.

Dose- 500mg to 1 gram

Anupana- Madhu and Ghrita

Time of administration- Beginning, middle and end of the meal.

Indications- It alleviates Vatapitta Roga if taken in the beginning of meals. If administered in the middle of meals it cures Vistambha and Amlapitta, and administered in the end of the meals it counter acts the defects caused by food and drinks. Moreover, if administered during digestion, it relieves severe colic and gastritis.

Pharmacological actions- Chakshushya Palitaghna and Rakta Prasadana.

Other indications- Kapha pitta Samudbhava Rogas, Pandu and kamala.

Research update and Clinical evidence

Clinical Trial done on Dhatri lauha by taking study design as open label multicentric (at 12 centres) and sample size of 400. One capsule (500 mg) of drug was given twice daily after meal with warm water orally. The experimental and clinical studies are suggestive of safety of Dhatri lauha at prescribe doses under medical super vision. Ref- Evidence based safety of Ayurvedic Herbo Mineral Formulation. CCRAS, Ministry of AYUSH, Government of India. ISBN : 978-93-83864-10-2.

The findings of this multi-center trial demonstrate that Dhatri Lauha use is associated with improvement in the hemoglobin level, RBC, and iron metabolism parameters in patients with IDA. Further, it was well tolerated and clinically safe. Based on the outcomes of this exploratory single-arm trial, future RCTs with a large sample size and extended follow-up period may be planned to obtain more reliable results. The outcomes of these RCTs will enable the inclusion of Ayurveda interventions in the Government of India programs to reduce the prevalence of anemia such as the Anemia Mukt Bharat program. Ref- Srikanth N, Rao BC, Yadav B, Rai AK, Jameela S, Rana RK, Singhal R, Khanduri S, Sharma BS, Makhija P. Dhatri Lauha in the management of iron deficiency anemia: A prospective open-label single-arm multi-center trial. AYU (An International Quarterly Journal of Research in Ayurveda). 2021 Apr 1;42(2):69-75.

Amalakyadi Gutika (Sha.Sam.Ma.Kha.Vati Kalpana)

आमलं कमलं कुष्ठं लाजाश्च वटरोहकम्।
एतच्चूर्णस्य मधुना गुटिकां धारयेन्मुखे॥
तृष्णां प्रवृद्धां हन्त्येषा मुखशोषं च दारुणम्॥
(शा.म. 7/17)

Ingredients-

Amalaki	-	1 part
Kamala	-	1 part
Kushta	-	1 part
Laja	-	1 part
Vatarohaka	-	1 part
Madhu	-	Q.S.

Method of preparation- All above ingredient is powdered form rolled into pills with Madhu (honey) and kept in the jar.

Therapeutic use- Trishnahara (relieves severe thirst), Mukhashosha (dryness of the mouth)

Matra- 3-6 gm

Sevanakala- Muhurmuhu

Phalatrikadi Kwatha (Sha.Sam.Ma.Kha.Kwatha Kalpana)

फलत्रिकामृतातिक्तानिम्बकिरातवासकैः ।
जयेन्मधुयुतः क्वाथः कामलां पाण्डुतां तथा॥
(शा.म. 2/75)

Ingredients-

Triphala	-	1 part
Guduchi	-	1part
Tikta	-	1 part
Nimba Twaka	-	1 part
Kirata	-	1part
Vasaka	-	1 part

Method of preparation- All above ingredient

is powdered form prepare the Kwatha than add Madhu at the time of use

Anupana- Madhu

Matra- 48 ml

Therapeutic uses- Pandu and Kamala

Research updates

Phalatrikadi Kwatha was found effective in the treatment of Pandu in children, thus showing significant results with respect to symptoms like Dourbalyata, Aruchi and increase in HB%. No conclusion could be drawn on Phalatrikadi Kwatha in different Prakrutis due to non-uniform and less distribution in the category of different Prakruti. Ref- Kumar V, Savanur PP. Effect of Phaltrikadi Kwatha in the management of Pandu in Children- An Open Clinical Trial. Journal of Ayurveda and Integrated Medical Sciences. 2020 Aug 31;5(04):7-15.

Clinical study done on total 59 patient of Hepatitis B Positive. Patients were administered with Phalatrikadi kwath in a dose of 80 ml/day in two divided for six months. It has shown significant result on sign and symptom along with LFT $P<0.05$, negative Hbs Ag in 8 patients and HBV DNA (Chi-square =45.9 and $P<0.01$). Ref- Kumar N, Singh AK and Ghildiyal S. Potent Hepatoprotective Phaltrikadi kwath : A clinical study. SMJ Pharma Ther. 2015:1(1):1005.

Triphala Ghrita (Sha.Sam.Ma.Kha. Ghrita Kalpana)

त्रिफलाया रस प्रस्थं प्रस्थं वासारसोद्भवम्।
भृङ्गराजरस प्रस्थं प्रस्थमाजं पयः स्मृतम्॥
दत्त्वा तत्र घृत प्रस्थं कल्कैः कर्षमितैः पृथक्।
त्रिफला पिप्पली द्राक्षा चन्दनं सैन्धवं बला॥
काकोली क्षीरकाकोली मेदा मरिचनागरम्।
शर्करा कुण्डरीकं च कमलं च पुर्ननवा॥
निशायुग्मं च मधुकं सर्वैभिर्वि पाचयेत्।
नक्तान्ध्यं नकुलान्ध्यं च कण्डुं पिल्ल तथैव च॥
नेत्रदाावं च पटलं तिमिरं काचकं जयेत्।
अन्येऽपि प्रशमं यान्ति नेत्ररोगाः सुदारुणाः॥
त्रैफलं घृतमेतद्धि पाने नस्यादिबूचितम्॥
(शा.म. 9/67-71)

Ingredients-

Triphala Rasa	-	1 Prastha
Vasa Swarasa	-	1 Prastha
Bhrungaraja Swarasa	-	1 Prastha
Aja Paya (milk)	-	1 Prastha
Ghrita	-	1 Prastha

Kalka Dravya- Triphala, Pippali, Draksha, Chandana, Saindhava Lavana, Vala, Kakoli, Kshira Kakoli, Meda, Maricha, Shunthi, Sharkara, Pundarika, Kamala, Punarnava, Haridra, Daruharidra Madhuka each 1 Karsha Pramana.

Method of preparation- Prepare the Kwatha by adding all ingredients, then add Kalka Dravya and Ghrita prepared in the usual way.

Matra- 48 ml

Therapeutic uses- Netrarogaghna, Kandu, Netrasrava, Patala (vision defect), Timira and Kacha etc. It is used internally and also for Nasya.

Sevanakala- morning and evening

Research update and Clinical evidence

Clinical study done in total 10 patients to evaluated the efficacy of Triphala Ghrita in the dry eye patients to evaluated the efficacy of Triphala Ghrita in the dry eye syndrome. The drug was administered in the form of Tarpana for (Once daily in afternoon) 7 days in 3 sets with the interval of 7 day Holding time was 15 minutes. The results showed marked improvement in ocular symptom. Ref- Pawar BR et al. A clinical study on the efficacy of Triphala Ghrita Netra Tarpana in the management of Dry Eye Syndrome World Journal of Pharmaceutical Research, Vol. 7 (15) 2018 pp-682-87.

The explanation of clinical features of Shushkakshipaka in all classical texts collectively gives complete picture that resembles with dry eye syndrome. The effect of Triphala Ghrita Tarpana is better in the subsequent follow-up than immediately after effect of the treatment with minimal recurrence, in the cases .of dry eye

syndrome. The effect of Goghrita Manda Tarpana is better in immediately after effect of the treatment but found to have a greater rate of recurrence. Ref- Timmapur GM, Fiaz S. Efficacy of Triphala Ghrita and Goghrita Manda Tarpana in the management of Shushkakshipaka w.s.r. to dry eye syndrome: An open labelled randomized comparative clinical trial. AYU (An International Quarterly Journal of Research in Ayurveda). 2020 Jan 1;41(1):52-7.

Bhallataka

Rasa Panchaka-

Rasa	-	Katu, Tikta and Kashaya
Guna	-	Laghu, Tikshna and Snigdha
Vipaka	-	Madhura
Virya	-	Ushna
Karma	-	Dipana, Kaphahara, Pachana, Vatahara, Chedi, Bhedi, Medhya.

Therapeutic uses- Arsha, Anaha, Grahani, Gulma, Krimi and Kushtha

Pharmacological Action- Anti-cancerous, Anti-bacterial, Cardiac depressant, Anti-allergic, Hypotensive, Anti-arthritic, Anti-inflammatory.

First Shodhana Method- In this method, ripened fruits of Bhallataka are taken. They are subjected to put in the water. It is for the differentiation of Grahya and Agrahya Bhallataka as per the classics. The sunken fruits of Bhallataka are taken for Shodhana process. They are dried well in shade and then thoroughly rubbed with brick powder. By this method Bhallataka fruits get purified. Special mention is given here that Shodhita Bhallataka by this method are to be used for preparing Kwatha (decoction) and further used in Paka etc.

Second Shodhana Method- In this method, fruits of Bhallataka are put into a Pottali made-up of cloth and subjected to heat the Dola Yantra with media as buffalo-dung dissolved in four times water in heated mild heat It is to be for twelve hours Then Bhallataka fruits are removed from it and subjected for further process of mild heating in Dola Yantra with different media as Gomutra (cow-urine) and Godugdha (cow-milk), each for four prahara (twelve hours). Then they are washed carefully with hot water and thalamus is removed carefully. Then these fruits are subjected to heat in the Dola Yantra with media as coconut water. By this way the fruits of Bhallataka get purified Special mention is given here that Shodluta Bhallataka by this method are to be used for mixing in Churna (powder) formulations

Bhallataka Modaka (B.R. Pleeha Yakrit Rogadhikara)

भल्लातकाभयाजाजी गुडेन सह मोदकः।
सप्तरात्रान्निहत्याशु प्लीहानामतिदारुणम्॥
(भै.र. प्लीहा 50)

Ingredients-

Shuddha Bhallataka	- 1 part
Haritaki	- 1 part
Jiraka	- 1 part
Guda	- 6 Part

Method of preparation- Take equal parts of Bhallataka, Abhaya and Ajaji and compound them together onto a fine powder. Mix the preparation with Guda (jaggery- 6 parts) and make Modakas (large size pills) out of it.

Therapeutic use- Pleeharogahara

Matra- 1- 2 gm

Anupana- Water

Pathyapathya

Pathya- Rakta Shali, Yava, Lashuna, Haritaki, Laghu, Tikta Dravya.

Apathya- Dhumapana, Vivaswapna, Patrash-aka, Lavana Yukta Dravya.

Sevanakala- Bhojana Purva

Kala Maryada (duration)- 7 days

Research update and Clinical evidence

In Vivo study done on Bhallatak Modak in CCl4 induced hepatotoxicity and its comparison shows that it has potential hepato protective activity against the CCl4 induced liver damage in animal

model. Ref- Harmeet koure & Shruti bhobare– Effect of Bhallatak modak in Jan 2014 1(2) 175-18.

Clinical study done on Bhallataka modak in Pittaja arsha (30 patients) show complete relief in symptoms within two weeks. Ref- Satyarthi SS et al. A clinical study of Bhallatakadi modak in the management of Pittaja Arshas (Haemorrhoids). Dept. of Shalya tantra. Sri Dharmasthala Manjunatheshwara college of Ayurveda & Hospital Hassan.

Bhallataka Ghrita (B.R. Gulma Rogadhikara)

भल्लातकात्कल्क कषाय पक्वं सर्पिः पिबेच्छर्करया विमिश्रम् । तद्रक्तगुल्मं विनिहन्ति पीतं बलास गुल्मं मधुना समेतम् ॥ (भै.र. गुल्म 32/159)

Ingredients-

Shuddha Bhallataka	-	1 part
Ghrita	-	400 gm
Bhallataka Kwatha	-	1.6 Liter

Therapeutic use- Gulmahara (Kaphaja)

Matra- 3-6 gm

Anupana- Godugdha and Sharkara

Pathyapathya-

Pathya-Purana Shali, Ghrita, Jangala Mamsa, Laghu, Vatanulomana Dravya.

Apathya- Viruddha Anna Sevana, Vishtambi, Gurupaka, Matsya, Vega Dharana.

Sevalakala- Bhojana Purva

भल्लातकानां द्विपलंपञ्चमूलं पलोन्मितम् ।
साध्यं विदारीगन्धाढ्यमापोथ्य सलिलाढके ॥
पादावशेषे पूते च पिप्पली नागरं वचाम् ।
विडङ्ग सैन्धवं हिङ्गु यावशूकं विडं शटीम् ॥
चित्रकमधुकंरास्नांपिष्ट्वा कर्षसमान् भिषक् ।
प्रस्थञ्च पयसोदत्त्वा घृतप्रस्थं विपाचयेत् ॥
एतद्भल्लातकं नाम कफगुल्महरं परम् ।
प्लीहपाण्ड्वाम्यश्वासग्रहणीकासगुल्मनुत् ॥
(भै.र. गुल्म)

Ingredients- Bhallataka- 93 gm, Laghu Panchamula- 46 gm, Vidarikanda- 46gm, Jala-3 liter, Pippali, Shunthi, Vacha, Vaya Vidanga, Saindava Lavana, Hingu, Yava Kshara, Vida Lavana, Karchura, Chitraka, Madhuka, Rasna each one Karsha, Murchita Ghrita and Paya (milk) each one Prastha.

Method of preparation- Bhallataka, Laghu Panchamula and Vidarikanda mixed with water and boil reduce to one fourth. Subsequently, prepare a Kalka of remaining Dravya. Add this Kalka to the preparation and cook the same along with Murchita Ghrita and milk. This medicated Ghrita is known as Bhallataka Ghrita.

Matra- 6-12 gm

Anupana- Warm water or Milk

Therapeutic Benefits- It is excellent recipe for curing Kapha Gulma, Gulma, Pandu, Amaya, Grahani, Kasa and other types of Gulma.

Research update and Clinical evidence

Evaluation of wound healing potential of Bhallatakadi Ghrita using in-vivo excision and incision wound model shows that Bhallatakadi Ghrita exhibit wound healing activity in both models. Ref- Wayal SR, Gaurav SS. Evaluation of wound healing potential of Bhallatakadi Ghrita–Cow ghee-based poly herbal formulation: in vivo excision and incision wound model. Complement Integr Med 2021 1-9.

Bhallataka Guda (B.R. Arsha Rogadhikara)

भल्लातक सहदो द्वे जलद्रोणे विपाचयेत् ।
पादशेषे रसे तस्मिन् पचेद् गुड तुलां भिषक् ॥
भल्लातक सहदस्त्रार्द्धं हित्त्वा तत्र प्रदापयेत् ।
सिद्धेऽस्मिर्धिंफला व्योषयमानीमुस्त सैन्धवम् ॥
कर्षांशसंमितं दद्यात् त्वगेलापत्रकेशरम् ।
खादेदग्नि बलापेक्षी प्रातरूत्थाय मानवः ॥
कुष्ठार्शः कामलामेह ग्रहणी गुल्म पाण्डुताः ।
हन्यात् प्लीहोदरं कास क्रिमिरोग भगन्दरान् ॥
गुड भल्लातको ह्येष श्रेष्ठश्चार्शोविकारिणाम् ॥
(भै.र. अर्श. 9/129-33)

Ingredients- Two thousand fruit of Bhallataka, Guda one Tula, five hundred fruits of Shuddha Bhallataka with their outer coati ng removed, Triphala, Vyosha, Yavani, Saindhava, Twak, Ela, Patra and Keshara each one Karsha.

Method of preparation- Two thousand fruits of Bhallataka should be boiled with 12.50 liters of water till one fourth remains. To this, 12 Tola of Guda and five hundred fruits of Bhallataka should be added. After the preparation taken the shape of confection, the powder of 12 gms of each of Triphala, Vyosha, Yavani, Musta, Saindhava Lavana, Twaka, Ela, Patra and Kesha should be added to it.

Therapeutic uses- Kushta, Arsha, Kamala, Prameha, Grahani, Gulma, Pandu, Pleehodara, Kasa, Krimi Roga, Bhagandhara.

गुडभल्लातकः (द्वितीयकश्चक्रदत्तोक्तः) -
दशमूलामृता भार्गी श्वदंष्ट्रा चित्रकं शटी।
भल्लातकसहस्रं च पलांशं क्वाथयेद् बुधः॥
पादशेषे जलद्रोणे रसे तस्मिन् विपाचयेत्।
दत्त्वा गुडतुलामेकां लेहीभूतं समुद्धरेत्॥
माक्षिकं पिप्पलीं तैलमौरुबूकञ्च दापयेत्।
अर्शः कासमुदावर्त्तं पाण्डुतां शोथमेव च।
नाशयेद्वह्निसादं च गुडभल्लातकः स्मृतः॥
(भै.र. अर्श. 9/134-137)

Ingredients- One thousand fruit of Bhallataka, Dashamula, Amruta, Bhargi, Shwadamstra, Chiktaka, Shati, Guda, Pippali, Eranda Taila, Makshika etc.

Method of preparation- One thousand fruit of Bhallataka and 46 gm of Dashamula, Amruta, Bhargi, Swadamstra, Chitraka and Shati should be boiled along with 13 liter of water and reduced to one fourth. To this 5 kg Guda should be added and boiled till the form of confection is attained. After that, it should be moved from the oven. After it cool down to atmospheric temperature, add Pippali, Eranda Taila, Twaka, Ela and Maricha and honey should be added.

Therapeutic uses- Arsha, Kasa, Udavarta, Pandu, Shotha and used in Agnisada.

Bhallatakadi Taila (B.R. Nadivrina Rogadhikara)

भल्लातकार्कमरिचैर्लवणोत्तमेन सिद्धं विडङ्ग रजनीद्वय चित्रकैश्च । स्यानमार्कवस्य च रसेन निहन्ति तैलं नाड़ीं कफानिलकृतामपचीव्रषाश्चा ॥ (भै.र.)

Ingredients- Bhallataka Phala Majja, Arkamula, Maricha, Saindhava Lavana, Vidanga, Haridra, Daruharidra, Chitrakamula each Dravya 30 gm.

Taila - 960 gm
Bhringaraja Swarasa - 4 liter

Method of preparation- Take equal parts of Bhallataka, Arka, Maricha, Saindava Lavana, Vidanga, Haridra, Daruharidra and Chitraka. Compound them into Kalka. Cook the Kalka along with Murcchita Taila measuring 1 liter as well as juice of Markava measuring 4 liter. Thus obtain the medicated oil.

Therapeutic uses- It cures Nadi Vrana causes by Kapha and Vata, Apachi and all types Vrana.

Research update and Clinical evidence

Bhallataka tail, Pratisarana is effective in the treatment of Nasarsha wsr antrochoanal nasal polyp and significantly effective in reducing breathlessness, rhinitis, recurrent sneezing and post nasal drip. Ref- Nisar Ali khan, Subhanji Shivram Katwate. Efficacy of Bhallataka tail, Pratisarana in Nasarsha wsr antrochoanal nasal polyp - A case study. Jour. of Ayurveda & Hol. med, 2023; 11 (9) : 152-156.

Bhallataka Avaleha (B.R. Arsha Rogadhikara)

सुपक्व भल्लातफलानि सम्यग् द्विधा विधायढक सम्मितानि।
विपाच्य तोयेन चतुर्गुणेन चतुर्थशेषे व्यपनीय तानि ॥
पुनःपचेत्क्षीर चतुर्गुणेन घृतांशयुक्तेन घनं तथा स्यात् ।
सितोपला षोडशभिः पलोश्च विमर्घ संस्थाप्य दिनानि सप्त॥
ततः प्रयोज्याग्नि बलेन मात्रां जपेद्विकारानरिवलान् गुदोत्थान्।
कचाः सुनील घन कुञ्चियंताग्राः स्यास्ताक्ष्यं दृष्टिश्च शशाङ्क कान्तिः॥
जवो हयानां बलमुतमं च स्वरो मयूरस्य हुताशदीप्तिः ।
स्त्री वल्लभत्वं विविध प्रभावो नीरोगता द्वित्रिशतायुरेव ॥

न चान्नपाने परिहार्यमस्ति न चातपे नाध्वनि मैथुने च ।
प्रयोग काले सकलामयानां राजाधिराजश्च रसायनानाम् ॥
(भैर. अर्श. 9/157-161)

Ingredients-

Shuddha Bhallataka Phala	-	2.980 kg
Jala	-	12 liter
Ghrita	-	750 gm
Sharkara	-	750 gm
Godudha	-	12 liter

Method of preparation- Ripe fruits of Bhallataka should be cut into two pieces 2980 gm of this should be boiled in four times of water till one fourth remains. Then these fruits should be taken out boiled in four times of milk. To this, sufficient quantity 750 gm of Ghritam should be added. Boiling should continue till the recipe takes the form of thick Kalka. To this, 750gm of Sitopala should be added and the preparation is kept reserved for seven days.

Therapeutic uses- Rasayana

Matra- acc. to Agni Bala

Anupana- Godugdha

Research update and Clinical evidence

Clinical study done on Amrita Bhallataka shows signification activity in Asteoarthritis. Ref- Raut A, Bichile L. Chopra A, Patwardhan B, Vaidya A. Comparative study of a mrutabhallataka and glucosamine sulphate in oesteoarthritis: Six months open label randomized controlled clinical trial. J Ayurveda Integr Med. 2013 oct: 4 (4):229-36 doi : 10.4103/097-9476.123708.

Bhallatakadi Lepa (B.R. Kushta Rogadhikara)

भल्लातकद्वीपि सुधार्कमूलं गुञ्जाफलत्र्यूष्ण शङ्खचूर्णम् ।
तुत्थं सुकुष्ठं लवणानि पञ्च क्षारद्वयं लाङ्गलिकाञ्च पवत्वा ॥
स्नुह्यर्क दुग्धे घनमायस्थं शलाकया तद्विदधीतलेयम् ।
कुष्ठे किलासे तिलकालके च सर्वेषु दुर्नामसु चर्मकीले ॥
(भै.र. कुष्ठ 54/10-11)

Ingredients - Bhallataka Phala, Chitaka Mula, Arka Mula, Arka Mula, Gunja Pahala, Trikatu, Shankha Bhama, Tuttha, Kushta, Pancha Lavana, Drayakshara, Langali, Snuhi Kshira, Arja Kshira.

Therapeutic uses- Kushtahara, Kilasa

Matra- Lepana

Seavanakala- Day time

Research update and Clinical evidence

Clinical trial on B. Lepa 15 patients, to evaluate the effect on Charmakula shows non significant result. However, in the study Gulab Jala was used instead of Arka and Snuhi ksheer. Ref- Pahadiya L, Jwapana B. A clinical trial on the efficacy of Bhallatakadi lepa in Charmkula wsr cutaneous wort. IJ APR 2017 5(7) pp 63-66.

Bhallatakadi Kwatha (B.R. Urusthabha Rogadhikara)

भल्लातकामृता शुण्ठी दारुपथ्या पुनर्नवाः ।
पञ्चमूलीद्वयोन्मिश्रा ऊरुस्तम्भनिलबर्हणाः ॥
(भै.र.ऊ.रू. 28/15)

Ingredients- Shuddha Bhalaltaka, Guduchi, Shunthi, Devadaru, Haritaka, Punnarnava, Dashamula.

Method of Preparation- This is a decoction-based formula involving all ingredient in equal parts, raise 25 gm of their mix and decoct it along with water measuring 200ml till it is reduced to one fourth.

Therapeutic uses- Urustambhahara

Matra – Acc. to Agni

Sevana Kala- Prata Kala (morning)

Gandhaka

Gandhaka stands next to Parada in importance. Essential substance for Murchana and Marana. Without the combination of Parada and Gandhaka, most of Rasashastra compound formulation would not have been possible.

Guna Karma

गन्धाश्मातिरसायनः सुमधुरः पाके कटूष्णो मतः ।

कण्डूकुष्ठविसर्पददृदलनो दीप्तानलः पाचनः ॥
आर्मान्मोचनशोषणौ विषहरः सूतेन्द्रवीर्यप्रदः ।
गौरीपुष्पभवस्तथा कृमिहरः सत्वात्मकः सूतजित् ॥
(र.र.स 3/16-17)

Rasa - Madhura

Vipaka - Katu

Virya - Ushna

Doshagnata - Kandu, Kustha, Visarpa, Dadru

Karma - Deepana, Pachana, Ama Pachana and Shoshana, Vishahara, Parada Virya Prada, Krimihara, Satva by origin, control Parada.

Pathyapathya

जांगलानि तु मांसानि छागलानि प्रयोजयेत् ।
(आ.प्र. 2/41)

Meat of dry land animals, birds and goat should be taken.

क्षाराम्ल तैल सौवीर विदाहि द्विदलानि तथा ।
शुद्धगन्धक सेवायां त्यज्यं योगयुतेन हि ॥
(र.र.स 3/36)

Kshara Amla Rasa, Taila, Souvira (Kanji), Vidahi Ahara and Dwidhala Ahara should be avoid.

Gandhaka Churna (SY page 217)

काकमाची भृंग रसे सप्तकृत्वस्सुभावितं ।
गंधक सूतसहितं आतपे शोषयेत्पुनः ॥
वाकुची चूर्ण संयुक्तं मात्रायाद्य सुयंत्रितः ।
क्षीराऩ्नाशी जयेत्कुष्ठानष्टादशविधानक्षणात् ॥
(स.यो. 94 गन्धक चूर्ण)

Ingredients-

Shuddha Gandhaka (seven times Bhavana of Kakamachi or Bhrungaraja)- 1 Part

Shuddha Parada- 1 part

Bakuchi Churna- 1 part

Method of preparation – Take one part of Gandhaka and steep it with Kakamachi Swarasa and Bhrigaraja Swarasa for seven days. Add equal quantity of Parada and prepare Kajjali by pounding well. Then carryout Bhavana for 7 more times with same liquid. Afterwards add equal quantity of Bakuchi Churna to Kajjali and pound them well with the same Swarasa and make in to pills and dry them. Milk diet only should be given during the course of treatment.

Indication – All types of Kushta

Anupana- Dugdha

Matra- 50 mg

Sevana Kala- Before food

Gandhaka Rasayana (AFI-Part II, Page 115)

शुद्धो बलिगौपयसा विभात्य ततश्चतुर्जातगुडुचिकाभिः ।
पथ्याक्षधात्र्यौषध भृंगराजैर्भाव्योऽष्टवारं पृथगार्द्रकेण ॥
शुद्धे सितां भोज्य तुल्यभागां रसायनं गन्धक राजसंज्ञम् ।
कर्षोन्मितं सेवितमेति मर्त्यो वीर्य च पुष्टि दृढदेहवहिनम् ।
कण्डूं च कुष्ठं विषदोषमुग्रं मासद्वयेनेह जयेत्प्रयोगः ।
घोरातिसारं ग्रहणीगदं च हरेच्च रक्तं दृढशूलयुक्तम् ॥
जीर्णज्वरे मेदगणे प्रकृष्टं वातामयानां हरणे समर्थम् ।
प्रजाकरं केशमतीव कृष्णं करोति चेद् भक्षति चार्धवर्षम् ॥
(यो.र.र. 1-4)

Ingredients- Bali (Shuddha Gandhaka), Gopayasa, Twaka Kwatha, Ela Kwatha, Patra Kwatha, Nagakeshara, Guduchi Swarasa, Haritaki Kwatha, Bhibitaki Kwatha, Amalaki Kwatha, Shunthi Kwatha, Bhringaraja Kwatha, Ardharaka Swarasa quantity sufficient for Bhavana for 8 times each. Sita equal to Gandhaka.

Method of preparation- Equal quantity of the ingredients Twak, Patra, Ela and Nagakeshara should be finely powered and boiled for some time in vessel Arka Yantra with narrow neck connected with condenser to collect the volatile oil in condensed water, the remaining Kwatha liquid may be strained and used for Bhavana.

Matra- 1 to 3 gm. 1 Karsha

Therapeutic use- Kandu, Kustha, Visha Vikara, Viryakshaya, Agnimandya, Atisara, Grahani, Shula, Jirnajwara, Meha.

Sevana Kala- Prata Kala (morning)

Kala Maryada- 2 month.

Research update and Clinical evidence

Gandhaka Rasayana is very effective in Shushka Vicharchika the study was done in 30 patients in the dose of 500 mg in two divided dose for 42 consecutive days. Ref- Patil. Kavita Sachin, Phartale vaibhav dattatray. Patil Sachin Madhav. Role of Gandhaka Rasayana in Shuska vicharchika (Eczema) Ayushdhara, 2016; 4(3):1207- 1210.

Gandhaka Druti (RRR 3rd Chapter)

कलांश व्योष संयुक्तं गन्धक श्लक्ष्ण चूर्णितम्।
अरत्नि मात्रे वर्धिं तद्विप्रकीर्ण विवेष्ट्य तत्॥
सूत्रेण वेष्टमित्वाऽथ यामं तैले निमज्जयेत्।
घृत्वा संदंशतो वर्तिमध्यं प्रज्जालयेच्चतम्॥
द्रुतो निपततो गन्धो विन्दुशःकाय भाजने।
तां द्रुतिं प्रक्षिपेत्पत्रे नाग वल्लयार्धिविन्दुकाम्॥
वल्लेन प्रमितं स्वच्छं सूतेन्द्रं च विमर्दयेत्।
अङ्गुल्याऽथ सपत्रां ता द्रुतिं सूतं च भक्षयेत्॥
करोति दीपनं तीव्रं क्षयं पाण्डुं च नाशयेत्।
कासं श्वासं च शूलर्तिं ग्रहणीमति दुर्धराम्॥
आमं विनाशयत्याशु लघुत्वं प्रकरोति च॥

(र.र.स. 3/27-31)

Ingredients-

Shuddha Gandhaka	- 1 part
Trikatu	- 1/16 part
Tila Taila	- Quantity sufficient

Method of Preparation- 1 p Shuddha Gandhaka + 1/16 p Trikatu powdered spread on cloth of size 1 Aratni cloth rolled tied with thread dipped in Taila, 3 hrs hold with forceps and burn collect drops in glass vessel.

Therapeutic use- Rasayana, Dipana, Kshaya, Pandu, Kasa, Shwasa, Shula, Grahani and Ama Pachana.

Matra- three Bindu (drops)

Anupana- Nagavalli (betel leaf)

Sevana Kala- Prata Kala (morning)

Research update and Clinical evidence

Clinical study done in 30 patients. Druti in Kitibha. If to evaluate the effect of Gandhaka was applied locally. Significant (P<0.001) reduction in the symptoms like scaling, plaque size, blackish discolouration, itching was found after treatment. The study concluded that Gandhaka druti's was found effective in Kitibha for local application. Ref- SL Jayasingha et.al. clinical study on the effect of local application of Gandhaka Druti in the Management of Kitibha (Psoriasis) Researchgate July 2018.

Gandhaka Taila (R.T. 8th Chapter)

आवर्तमाने पयसि क्षिपेद्वै विशुद्ध सौगन्धिकजं हि चूर्णम्।
तदुद्धवक्षीरसमुत्थमाज्यं गन्धस्य तैलं वितरेत्प्रतप्तम्॥
सुगन्धतैलं विन्हन्ति शीघ्रं क्षुद्राणि कुष्ठानि विशेषतो वै।
हरेद्विसर्पादिक रोगसङ्गं विलेपनाद्वाऽशनतः प्रकामम्॥

(र.त. 8/94-95)

Ingredients- Gandhaka and Dugdha

Method of preparation- Add finely ground Gandhaka (sulfur powder) to the boiled milk and cool the milk and extract the butter. Now heat this butter very much, then Gandhaka Taila (sulfur oil) will come on top of the ghee. Remove it thoroughly from hand or cotton.

Therapeutic uses- Eating this Gandhaka Taila and applying it to the body destroys Kushta, especially Kshudra Kustha and other skin and blood related diseases.

Matra- For external application

Research update and Clinical evidence

Gandhaka Taila contains different types of falty acids including Caproic acid, Lamic acid, myristic acid, steric acid oleic acid and archidic acid. It has an average of 3.28% Sulphur. Ref- Aiswarya A. Internatinal Journal of Ayurvedic & Herbal medicine 8(4) July-August 3271-3277.

In a clinical study done by Deshmukh et al. Gandhakadya taila was evaluated on Pama (Scabies) in children. In this study 30 patients were given Bahya chikitsa i.e. in the form of external application for seven days. The result shows that Gandhakadya taila is an suitable therapy in Pama. Ref- Nilesh Deshmukh, Bhandara Prasanna,

Devendra Barsing. Compare the efficacy of Jeerakadya taila and Gandhakadya taila on Pama (Sacabies) in children. Ayurshadhara. 2018; 5(5):1888-1900.

Gandhakadya Malahara (AFI-Part II, Page 165)

सिक्थ तैलं सुविमलं रसतोलक सम्मितम्।
गन्धकं गिरिसिन्दूरं तोलकार्द्धामितं पृथक्॥
टङ्कणं घनसारं च पृथक् माष द्योन्मितम्।
दत्वा सम्मेल्य यत्नेन काचकुप्यां निधापयेत्॥
मतो मलहरोऽयं तु गन्धकाद्य समाहवयः।
विनाशयत्याशु भृशं पामामत्यर्थदारुणाम्॥

(र.त. 8/63-65)

Ingredients-

Sukta Taila	-	72 gm
Shuddha Gandhaka	-	6gm
Girisindura	-	6 gm
Shuddha Tankana	-	2gm
Ghanasaraka (Karpura)	-	2 gm

Method of preparation-

Preparation of Sikta Taila- Sikta (bee wax) – 1 part, Tila Taila (sesame oil)- 5 parts. Five parts of Tila Taila is taken in clean stainless vessel and heated. To this one part of scraped Sikta is added and allowed to melt completely. Thus, Sikta Taila is prepared.

Preparation of Gandhakadya Malahara- Sikta Taila is taken in clean stainless-steel vessel, placed over mild fire. When it liquifies the vessel is taken out of fire and poured in a clean porcelain mortar and is added with fine powdered of all the remaining ingredients one by one and stirred homogenously. When it cools down itself, the mixture attains the consistency of Malahara. It is later stored in suitable wide mouthed clean dry container for further use.

Therapeutic uses-Pama (eczema)

Research update and Clinical evidence

- The content of Gandhaka Malahara possess Trodoshahara, Snigdha, Tikshna, Sara and Ushan properties. All ingridients have pharmacologically anti-fungal, anti-microbial, anti-oxidant action, thus it can effectively reduce infections and prevent its recurrence by improving the immunity of skin with anti-oxidant property. Shuddha Gandhaka is anti-fungal, and anti-microbial, it helps in detoxification and tissue repair. Shuddha Tankana is anti-fungal and anti-bacterial.
- Analytical study of Gandhakadya Malhara shows that it has pH of 6.45, peroxide value in a range of 5.55 meq/kg, fatty matter 19.6 and viscosity index as 1.18. Ganhakadya malhara was found effective in proteins mirabilis and propionic bacterium acne.
- Clinical study done on Padadari shows that it is highly effective in the treatment of Padadari with 100% improvement in pain, itching and burning while 66.67% in cracks and 66.67% in dryness.
- Ref- Leena KC, Samila VK, Noble TM, Arya RP. A critical review on Gandhakadya malhara. Kerala Journal of Ayurveda. 2022:1(1)49-53.

Gandhakadi Lepa (RRS Shiroroga Chikitsa)

गन्धकं सूतकं तुल्यमर्कक्षीरेण सैन्धवम्।
पिष्ट्वा च काञ्चनीमूलं लेपोऽयं गण्डमालिकम्॥
अदृश्यां स्फोटयत्याशु मुण्डी द्रावेण पेषितम्।
तन्मूलं लेपयेत्तत्र त्रिःसप्ताहं प्रशान्तये॥

Ingredients- Shuddha Gandhaka, Shuddha Parada and Saindhava Lavana. For Bhavana Kanchanara and Arka. Mundi.

Method of preparation- First Shuddha Parada and Gandhaka in equal quantity should be taken in Khalwa Yantra and Kajjali prepared, then add equal quantity of Saindhava Lavana to it. Kanchanara Twak Churna should be added and bhavana of Arka Dugdha should be given. This should be applied on Gandhamala as Lepa. Mundi Swarasa or Kwatha bhavana should be given to mixture of Shuddha Parada, Gandhaka, Saindhava Lavana and Kanchanara Twak Churna.

Therapeutic uses- This should be applied as Lepa on Adrushya Gandamala for 3 weeks to cure Gandamala.

Kala Maryada- 3 week or 21 days

Gandhaka Vati (B.R. Agnimandya Rogadhikara)

रसार्द्धं गन्धक शुद्धं शुण्ठी चूर्णं च तत्समम्।
लवङ्गं मरिचं चापि प्रत्येक तु पलं भवेत्॥
सैन्धवं त्रिपलं ग्राह्यं त्रिपलं च सुवर्चलम्।
चणकाम्लं पलद्वन्द्वं क्षारं मूलकजं तथा॥
मर्दयेन्निम्बुकद्रावैर्यामान् सप्त खरांशुभिः।
बदर प्रमाण मात्रा सर्वाजीर्ण प्रणाशिनी॥
चणक स्थाम्लकाभावे चुक्रं देयं मनीषिभिः॥

(भै. र. अग्निमांद्य/242-244)

Ingredients-

Shuddha Gandhaka	-	24 gm
Shuddha Parad	-	48 gm
Shunthi Churna	-	48 gm
Maricha Churna	-	48 gm
Lavanga Churna	-	48 gm
Saindhava Lavana	-	144 gm
Sauvarchala Lavana	-	144 gm
Chanakamla	-	96 gm
Mulaka Kshara	-	96 gm
Bhavana Dravya	-	Nimbu Swarasa for seven times

Method of preparation - All the ingredients are taken as a specified quantity mentioned. The materials which have to be purified are to be purified and processed. Then all the ingredients are powdered and mixed together. Then the lemon juice is added in sufficient quantity to the mixture and triturated well in a mortar and allowed to get dry. The trituration process has to be done for seven days by adding fresh lemon juice every day. Once it becomes semisolid after seven days of trituration the pills are rolled out in 'Badara' fruit size. When the pills are dried can be stored in an airtight glass container for use.

Matra- 2 gms (Badara Pramana)

Anupana- Nimbu Swarasa, Ushnodaka

Therapeutic uses-Agnimandya, Ajirna

Gairika

Rasa –Madhura, Kashaya

Guna –Snigdha

Virya –Sheeta

Karma-Pittakaphahara, Chakshushya, Daha, Visha, Kanduhara, Vranaropana, Jwaraghna,

Matra –2 -4 Ratti

Gairika Pradeha (Cha.Chi. Visarpa Rogadhyaya)

पद्मिनीकर्दमः शीतो मौक्तिकं पिष्टमेव वा॥
शङ्खः प्रवालः शुक्तिर्वा गैरिकं वा घृताप्लुतम्।
पृथगेते प्रदेहाश्च हिता ज्ञेया विसर्पिणाम्॥

(च.चि. 21/82

Ingredients and method of preparation- The Padmini Kardama Shita (cooling mud at the root of lotus), Mauktika (pearls) or Mishtameva (rice flour) or Shankha (conch shells), Pravala (coral), Shikti (oyster shell) and Gairika (ochre) should be mixed with Ghrita (ghee) separately.

Indication- Beneficial externally as a Pradeha in Visarpa.

Research update and Clinical evidence

Gairika churna along with Yastimadhu churna was applied externally with the help of Dugdha in the treatment of Visarpa (Herpers zoster). Along with this lepa Shodhana cikitsa (Raktamokshana) and Shaman chikitsa (Chandrakala vati-250) mg 2-2-2-2, Panchatikta ghruta Guggulu 250 mg 2-2-2-2, Katuki churna 3 gm +Avipaltikar churna 2 gm at bed time with water) was given. The result shows relief in the symptoms of Daha and Pidika.

Ref- Rai Pushkar et al. A successful clinical study on management of Visarpa (Herpes zoster) through Ayurveda. wjpmr, 2019, 5(7)238-241.

Laghusuta Shekhara Rasa (AFI Part II Page 282)

Ingredients

Svarna Gairika - 2 part
Shunthi Churna - 1 parts
Nagavalli Swarasa - Q.S. for Bhavana

Method of preparation- First Svarana Gairika is taken and it is purified. It is with Shunthi powder and ground with the betel leaf juice for three days. To prepare betel leaf juice extract, ripe, yellow coloured Nagavalli type of betel leaf is taken and crushed, juice is collected and filtered. After grinding Svarna Gairika and Shunthi powder with betel leaf for 3 days, pills are rolled of two Rattti size (250mg).

Matra- 250-500mg

Anupana- Shita Dugdha

Therapeutic use- Pittaja Shirashula, Ardhava Bhedaka, Suryavarta, Pittaja Unmada, Daha, Urdhwaga Raktapitta, Mukhapaka.

Gairikadya Malahara (AFI-Part III, Page 224)

Ingredients-

Svarna Gairika - 12 gm
Haridra - 12 gm
Haratala - 1 gm
Sukta Taila - 72 gm

Matra - For external application

Therapeutic uses- Kandu, Twaka Daha etc.

Research update and Clinical evidence

Gairikadya malhara in a concentration of 100 mg/ml is found effective against Bacilus cereus (MTCC 6840), S. aureus (MTCC 737), Escherichia coli (MTCC 1687), P. aeruginosa (MTCC 424). Salmonella typhi (MTCC 98), S. epidrmis (MTCC 96), Enterococcus feacalis (MTCC no. 439) and Candida albicans (MTCC 227).

Ref- Javed D. Das AK. Preparation, standardization, and in vitro antimicrobial efficacy of Gairikadya malhara-An Ayurvedic ointment. Int J. Ayurveda Res 2022;3:136-41.

Gairikadya Gutikanjana (B.R. Netraroga)

Ingredients

Swarna Gairika - 1 Part
Saindhava Lavana - 2 Part
Pippali - 4 Part
Tagar - 8 Part

Bhavana is given with jala or Chaga Dugdha (Goats Milk) -Gutika will be prepared.

Therapeutic uses- Abhishyanda (Netraroga)

Gairika Rasakriya (Cha.Chi.26/235)

गैरिकं सैन्धवं मुस्तं रोचना च रसक्रिया।
(च.चि. 26/235)

Ingredients-

Swarna Gairika - one part
Saindhava Lavana - one part
Musta - one part
Gorochana - one part

Method of application - Paste of Gairika, Saindhava, Musta, Rochana is applied.

Therapeutic uses- Kaphaja type of Netra Roga

Varnakara Lepa (Cha.Chi.25/117)

ध्यामकाश्वत्थनिचुलमूलं लाक्षा सगैरिका।
सहेमश्चामृतासङ्ग कासीसं चेति वर्णकृत्॥
(च.चि. 25/117)

Ingredients-

Roots of Dhyamaka (Gandha Truna) - one part
Ashvattha - one part
Nichula - one part
Laksha - one part
Gairika(red-ochre) - one part
Nagakeshara - one part

Tuttha - one part
Kasisa - one part

Therapeutic uses- Restore the Varnya (natural colour) of the skin. Similarly, Hema (gold Bhasma) Amruta Sanga (Kharparika Tuttha) and Kasisa promotes the Varnya (natural colour).

Types of Lepa	Thickness of Lepa
Doshaghnalepa (Kanishta Matra)	1/4 Angula
Vishaghnalepa (Madhyama Matra)	1/3 Angula
Varnyalepa (Uttama Matra)	1/2 Angula

Bidalaka

Bidalaka is a Kriyakalpa, where paste form of medicine is applied on the exterior part of the eye. Since the eyes when applied with the medicine look like cat's eye, it is called as Bidalaka. (Bidalaka=Vidalaka=cat)

Definition

बिडालकोहिहलेपोनेत्रेपक्ष्मविर्जिते ।
तस्यमात्रापररज्ञेयामुखलेपविदनित् ॥

(शा.उत्तर.13/31)

The external application of Lepa over eyelids, leaving the eye lashes is known as Bidalaka. Thickness of application is similar to that of Mukhalepa.

3 CHAPT. Single Drug (Bhasma, Shuddha & Pishti)

Syllabus

Single drug its variety of formulations and their different indications, Chemical/phytochemical composition, Pharmacodynamics and pharmacokinetics as per formulation, Therapeutic properties, Awasthanusara Uses (as applicable), Matra, Anupana, Pathyapathya, Sevana Kala, Kala maryada (duration of medication as applicable), Side effects of medication (as applicable) and Research updates and clinical evidences for each of the following formulations

Abhraka Bhasma, Swarna Makshika Bhasma, Swarna Bhasma, Rajata Bhasma, Lauha Bhasma, Tamra Bhasma, Vanga Bhasma. Naga Bhasma, Yashada Bhasma, Kasisa Bhasma, Shuddha Shilajatu, Shuddha Gandhaka, Shuddha Gairika, Shuddha Kankshi. Mukta Pishti & Bhasma, Pravala Pishti & Bhasma, Vajra Bhasma, Kaparda Bhasma, Shankha Bhasma, Godanti Bhasma, Shuddha Tankana.

Learning objectives

1. Explain chemical form/composition, Pharmacodynamics and pharmacokinetics of Abhraka, Loha and Godanti Bhasma.
2. Explain therapeutic properties, dosage, Anupana, Pathyapathya, duration of treatment, Sevana Kala, shelf life, important Yogas of each Bhasma.
3. Describe Apakwa Ashuddha Avidhi Bhasma Sevanajanya Vyadhi and their Shanti-upaya.
4. Describe in detail Amayika Prayoga (Therapeutic uses) of each Bhasma/Pishti with given references.
5. Explain research updates and clinical evidences of Swarna Bhasma, Makshika Bhasma and Shankha Bhasma.

Total - 18 hours (Lecture :12 hour, Non-lecture: 06 hours)

Marks- 15 marks, MCQ- Yes, SAQ (5 Marks)- Yes and LAQ (10 Marks)- Yes

Introduction

Bhasma are the unique and important organometallic preparations used in Ayurveda Therapeutics. Bhasma are complex structures generally prepared by Repeated incineration of metals and minerals with medicinal herbs decoction or juices. In view of high demand for the use of Bhasma, the Herbo mineral Ayurvedic formulation, there is an urgent need to bring about standardization of their preparation process and the end product.

Bhasma, is a ayurvedic metallic/mineral preparation, treated with herbal juices or decoction and exposed for certain quantum of heat as per puta system of Ayurveda, which itself is well known in Indian subcontinent since 7th century A.D. and widely recommended for the treatment of many disease conditions. Bhasma are claimed to be biologically produced nanoparticles, which are prescribed with several other medicines of Ayurveda.

Abhraka Bhasma

मृतानि लोहानि रसी भवन्ति निघ्नति युक्तानि महामयांश्च ।
अभ्यासयोगद् दृढदेहसिद्धिं कुर्वन्ति रुग्जन्मजराविनाशम् ॥
(र.र.स. 5/139)

Abhraka Bhasma is a type of Bhasma prepared from repeated incineration of mineral mica with decoctions of about 72 herbs. The particle size of Abhraka Bhasma has been shown to be in the range of 29-88 nanometers and Fe, Ca, Se, Mg and K are found to be as major constituent. The quality of Abhraka Bhasma differs as per the number of puta performed. The Sahastraputi Abhraka Bhasma that undergoes 1000 puta is considered to be of finest quality. Different grades of Abhraka Bhasma are used in the treatment of a vast range of ailments and also as a constituent of many rejuvenating formulations.

Chemical composition Could be Mg (Al Fe)$_2O_4$, KAl SiO_4/Si_2O_6 having spinal structure.

Pharmacodynamics-(R.T. 10/72)

Rasa	- Madhura Rasa
Guna	- Snigdha
Virya	- Shita
Doshaghnata	- Tridoshanashaka

Pharmacological activity

Keshya, Varnya, Ruchikara, Dipana, Balya, Netrya, Medha, Stanya Vardhana, Ayushya Vardhana, Rasayana, Vrushya, Grahi etc.

चिकित्सकीय गुण (Therapeutic properties)

गौरी तेजः परममृतं वातपित्तक्षमघ्नं प्रज्ञाबोधि प्रशमितरूजं वृष्यमायुष्यमग्यम् ।

बल्यं स्निग्धं रूचिदमकफं दीपनं शीतवीर्यं तवयोगैः सकलगदह द्वयोम सूतेन्द्रबन्धि ॥ (र.र.स. 2/2)

The Abhraka which is essence of Shukra of Parvati, is like best ambrosia. It purifies Vata, Pitta, Reduces Kshaya, strengthens the intellect and eradicates the diseases. It is Vrushya (aphrodisiac), appetizer, alleviator of Kapha, promoter of strength and life span and has Shita Virya. It can cure all the diseases if taken along with various Anupana.

Therapeutic Uses- Jwara, Netraroga, Grahani, Raktapitta, Pandu, Kshaya, Haleemaka, Prameha, Mutrakruchhra, Shwasa, Kasa, Mandagni and it generally reduces Vata and Kapha.

Avasthanusara prayoga

हन्यात्त्रिदोष व्रणमेह कुष्ठप्लीहोदर ग्रन्थिविषक्रिमीश्च ॥

(आ.प्र. 2/101)

Abhraka Bhasma indicated as Tridoshahara, Vrana Roga, Prameha, Koshtha, Udara, Granthi, Visha and Krimi Roga.

1. In Jwara, Abhraka Bhasma is administered once or twice daily along with Rasasindura. (R.T. 10/74)
2. In Jirna Jwara, Abhraka Bhasma is administered once or twice daily along with Pippali Churna and Madhu. (R.T. 10/75)
3. For improve the eye sight, Abhraka Bhasma is administered once or twice daily along with Triphala Churna and Madhu. (R.T. 10/76)
4. In Grahani Roga, Abhraka Bhasma is administered once or twice daily along with Trikatu Churna and Ghruta. (R.T. 10/75)
5. In Raktapitta Roga, Abhraka Bhasma is administered once or twice daily along with equal quantity of Haritaki Churna, Guda or Khanda Sharkara, Ela and Vasa Swarasa. (R.T. 10/78)
6. In Prameha Roga, Abhraka Bhasma is administered once or twice daily along with Haridra Churna, Pippali Churna and Madhu. (R.T. 10/79)
7. In Kshaya Roga, Abhraka Bhasma is administered once or twice daily for one month along with Swarna Bhasma. (R.T. 10/80)
8. In all types Prameha Roga, Abhraka Bhasma is administered once or twice daily along with Guduchi Sattva. (R.T. 10/81)
9. In Mutrakrucchra Roga, Abhraka Bhasma is administered once or twice daily along with Bhumyamalaki, Gokshura, Bruhat Ela, Khanda Sharkara added with Ghruta. (R.T. 10/82)
10. In Arsha Roga, Abhraka Bhasma is administered once or twice daily along with Shuddha Bhallataka Churna. (R.T. 10/83)
11. In all types of Vataja Roga, Abhraka Bhasma is administered once or twice daily along with

Shunthi, Pusharamula, Bharangi and Vamsalochana with Madhu (R.T. 10/86)

12. In all types of Pittaja Roga, Abhraka Bhasma is administered once or twice daily along with Chaturajataka Churna and Khanda Sharkara with Milk. (R.T. 10/88)
13. In all types of Kaphaja Roga, Abhraka Bhasma is administered once or twice daily along with Pippali Churna and Kataphala Churna with Madhu. (R.T. 10/89)

Dosage-125 mg- 375 mg (AFI Part I 18:1)

Anupana- Madhu, Ghruta, Triphala Kwatha, Guduchi Sattva (AFI Part I 18:1)

Pathtapathya

क्षाराम्लविदलं कोलं कर्कटीकारवेल्लकम्।
वृन्ताकं च करीरं च तैलं चाभ्रे विवर्जयेत॥
(आ.प्र. 2/140)

Apathya- Kshara, Amla, Chanaka, Masha, Kola, Karkati, Vruntaka, Karira, Taila

Sevankal/Kalmaryada

मास त्रयेण रक्ताख्यं क्षयं श्वास सुदारूणम्।
पञ्चकासांश्च हृच्छूलं ग्रहण्यर्शोगदांस्तथा।
आमवातं तथा शोषं पाण्डुरोगं सुदारूणम्॥
(आ.प्र.170-171)

Abhraka Bhasma with Amalaki, Shunthi, Maricha and Pippali and Vidanga Samana Matra for 3 months indicated in Raktakshaya, Kasa, Shwasa, Hrudyashula, Grahani, Arsha, Amavata, Shosha, Pandu and 18 types of Kustha.

Ashuddha Apakwa, Avidhi Sevanajanya Vyadhi and their Shantyupaya

पीड़ा विद्यते विविधां नराणां कुष्ठं क्षयं पाण्डुगदं च शोथम्।
हृत्पार्श्व पीड़ा च करोत्य शुद्धमभ्रं हि तद्वद्गुरूबह्विहृत्स्यात्॥
(आ.प्र. 2/103)

Ashuddha Abhraka Bhasma Sevana causes Pida, Kustha, Kshaya, Pandu, Shotha, Hratpida, Mandagni etc.

सेवितं चन्द्र संयुक्तं मेहं मन्दानलं चरेत्।
(र.र.स. 2/13)

Chandrika Yukta Abhraka Bhasma cause Prameha and Mandagni.

Modern view Bhasma maintains optimum alkalinity for optimum health. These achieve a healthy alkaline level by neutralizing acid. Bhasma protects body from free radical damage.

Pal D, Sahu CK, Haldar A. Bhasma: The ancient Indian nanomedicin. J Adv Pharm Technol Res 2014; 5:4-12. Sharma DC. India raises standards for traditional drugs. Lancet 2000; 356:231.

Bhasma are comparable with the action of None particles in the body. A nano particle in typically defined as an ultra-fine particle of matter ranges between 1-100 nanometers in diameter (Mao et.al 2018). Nano particles can be used to provide a variety of drug delivery like selective drug delivery, targeted drug delivery and controlled drug delivery to specific site of action in the body. Nano particles can also be absorbed through sublingual route directly into the blood stream. It is also hypothesized that rapid onset of therapeutic actions of Bhasma is due to subsequent action upon DNA/ RNA molecules and protein synthesis with in the cell.

Research update and Clinical evidence

In their study done by Ahmed N et.al on 11 patients of Prameha it was found that 8 Patients shown marked improvement when they were treated with Abhraka Bhasma Yoga. (Dr. Naeem Ahmed. A comparative clinical study on the effect of Abhraka Bhasma yoga & Nisha malaki churna in Madhumeha w.s.r to NIDDM. Dissertation submitted to Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka, Department of Post Graduates Studies in Kaya chikitsa, A.E.A. Ayurvedic Medical College 2015-16.

Abhraka Bhasma is found having in vitro arti cancer activity. It's activity increases with increasing number of Putas (Up to 100 Puta). This study shows that as the number of Puta increases its efficacy of the drug also increases. Yogesh L Tamhankar, Archana P Gharote. Effect of Puta on

in vitro anticancer activity of Shataputi Abhrak Bhasma on lung, leukemia and prostate cancer cell lines. Journal of Ayurveda and Integrative medicine : 11 (2):118-123, 2020.

Immunomodulatory activity

Shataputi Abhraka Bhasma has been (Stimulant) activity. It brings proved for its potent immunomodulatory about stimulation of Leucocytes and thus in turn leads to highly significant phagocytic activity. Flower this study was done in Vitro NBT test. (NBT-Nitro blue Tetrazolium Dye test.)

Note -Most of the Rasayana Dravyas are having immunomodulatory effects through

- Phagocytosis
- Histamine release
- Cytokine secretion modulation
- Lymphocyte expression
- Class switching
- Immunoglobulin secretion
- Cellular co-receptor expression

Tamhankar Yogesh Laxman, Bhadilkar Devyani Deodatta, Mehta Mahendra, Tryambblal, Suryawanshi Nilesh, Tomar Ekta. Screening of Immunoladlatory Effect of Shataputi Abhraka Bhasma. Ayurveda's Rasayan. International Journal of Ayurveda and Pharma Research. 2015;3(11):22-27.

Antihyperglycemic Activity Nanosized Abhraka Bhasma may induce Beta cells as it has exhibit insulin secretion or protect pancreatic significant anti hyperglycemic activity as well as high cell penetration efficacy in STZ-induced diabetic rats. (STZ-Streptozotocin).

Gopinath Harish, Shivashankar Murugesh. A study on toxicity and anti-hyperglycemic effects of Abhraka Bhasma in rats. Journal of Ayurveda and Integrative Medicine; 12 (2021):443-451.

Effect on allergic airway inflammation Shataputi Abhraka Bhasma is repeated to attempted allergen induced leukocyte infiltration specially eosinophils, lymphocytes, macrophages and neutrophils in BALF. Mucus hyper secretion, inflammatory cell infiltration and bronchial epithelial thickening were suppressed by treatment with Shata Puti Abhraka Bhasma. It was an animal study done by Balkrishna et al. Biotite-Calyx Based Traditional India Medicine Shastraputi-Abhraka-Bhasma prophylactically mitigate allergic airway inflammation in a mouse model of Asthma by Amending cytokine responses. Journal of Inflammation Research; 2021:14.4743-4759.

Swarna Makshika Bhasma

Chemical composition -Mixture of Fe_2O_3, FeS_2, CuS and SiO_2

Mohaptra S, Jha CB. Physicochemical characterization of Ayurvedic Bhasma (Swarna makshika Bhasma): An approach to standardization. Int. J. Ay. R. April-June 2010 1:2;82-86.

Pharmacodynamics

सुवर्णमाक्षिकं वृष्यं मधुरं तु रसायनम्।
तिक्तं स्वर्यञ्च चक्षुष्यं त्रिदोषघ्नं परं मतम्॥
(र.त. 21/26)

Rasa	- Madhura, Tikta
Vipaka	- Katu
Virya	- Shita
Guna	- Yogavahi
Doshaghnata	- Tridoshahara

Other Properties : Vrushya, Rasayana, Svarya, Chakshushya etc.

Antioxidant effect :In their study done by Dr. Shrikanth As et al it was found that Swarna Makshika Bhasma, at the dose of 200 mg/kg, shows reduction in the MDA level increase in CAT and GSH indicating its good antioxidant activity. In the same dose pattern inhibition of lipid peroxidation was also found and it was statistically significant when compared to CCl_4 group.

MDA – Malondialdehyde

GSH – Glutathione. It is produced by liver and nerve cells.

MDA is one of the end products of lipid peroxidation.

CCl_4– induce oxidative stress as the level of glutathione is increased on reported by the above study it is hypothesized that Swarna makshika may act at cellular level.

Dr. Srikanth A.S., Dr. PG Jodar. Antioxidant effects of Swarna Makshika BHASMA:

A experimental study. Journal of Ayurveda and Integrated Medical Sciences, 5(04), 92-101.

चिकित्सकीय गुण (Therapeutic properties)

क्षयमर्शांसि मेहानि विविधा बस्तिवेदनाः ।
पाण्डुश्वयथुकुष्ठानि विषदोषादिकान् हरेत् ॥
जीर्णज्वरमपस्मारमन्दानलमरोचकम् ।
अनिद्रां नाशयत्याशु योगवाहि परं मतम् ॥
(र.त. 21/27-28)

It cures the Kshaya Roga, Arsha Roga, Prameha, Basti Vedana, Pandu, Kushta, Visha Dosha, Jirna Jwara, Apasmara, Unmada, Arochaka, Anidra.

Avasthanusara prayoga (R.T. 2130-42)

1. In Sandra Meha, $^1/_2$ Ratti – 2 Ratti Swarna Makshika Bhasma subjected 7 to 21 Bhavana of Shalasaradi Gana Dravya administered daily. (R.T. 21/30)
2. In Rajayakshma Roga, $^1/_2$ Ratti – 2 Ratti Swarna Makshika Bhasma added with desired rations of Shuddha Shilajatu, Abhraka Bhasma and Vidanga Churna administered daily along with Madhu. (R.T. 21/31)
3. In Mutrakruccha Roga, $^1/_2$ Ratti – 2 Ratti Swarna Makshika Bhasma added with desired rations of Yavakshara administered daily along with Anupana. (R.T. 21/32)
4. In Shotha, $^1/_2$ Ratti – 2 Ratti Swarna Makshika Bhasma is administered daily along with decoction prepared from Punarnava, Guduchi, Shunthi and Daruharidra. (R.T. 21/33)
5. In Manasika Vikara, $^1/_2$ Ratti – 2 Ratti Swarna Makshika Bhasma is administered along with Kanchanara Twaka Swarasa. (R.T. 21/34)
6. In Vishama Jwara with chills, $^1/_2$ Ratti – 2 Ratti Swarna Makshika Bhasma is added with Ativisha Churna and Karanja Beeja Churna administered daily along with Anupana. (R.T. 21/35)
7. In Kasa Roga, $^1/_2$ Ratti – 2 Ratti Swarna Makshika Bhasma is added with Pippali Churna and Bibhitaki Churna administered daily for 7 days along with Anupana. (R.T. 21/36)
8. In Raktapitta Roga, $^1/_2$ Ratti – 2 Ratti Swarna Makshika Bhasma is added with Samagandhaka Kajjali administered daily along with Madhu. (R.T. 21/37)
9. In Garbhini Jwara, $^1/_2$ Ratti – 2 Ratti Swarna Makshika Bhasma is added with Rasasindura, Abhraka Bhasma and Trikatu Churna administered daily along with Anupana. (R.T. 21/39)

Dosage

गुञ्जार्द्धतः समारभ्य बलकालाद्यपेक्षयां ।
गुञ्जाद्वितय पर्यन्तः माक्षिकं योजयेद्भिषक् ॥
(र.त. 21/29)

Half Gunja to 2 Gunja (60-250mg) depend on Bala and Kala.

अनुपानं वरा व्योषं वेल्लं साज्य हि माक्षिके ।
(आ.प्र. 4/10)

Anupana- Madhu

Pathyapathya

अभ्यस्यास्त्वक्षमात्रा हि जीर्णे हितमिताशिना ॥
कुलत्थकाकमाच्यादिकपोतपरिहारिणा ।

In Charaka Samhita Chikitsa Sthana 16 chapter mention about the Pathyapathya. After the digestion of this drug the patient should take Hita Mita Ashana (wholesome food in small quantity) and should avoid Kulattha, Kakamachi and Kapota (pigeon meat).

Kala Maryada

शिलाजत्वभ्रजन्तुघ्नमधुभि परिशीलितम् ।
शीलितं मासमेकन्तु यक्ष्माणं विनिवारये ॥
(र.त. 21/31)

Swarna Makshika, Shilajatu, Abhraka Bhasma, and Vidanga with Madhu (honey) for one month can be used in Rajayakshma.

तुगाक्षीरीरजोमिश्रं शीलितं स्वर्णमाक्षिकम्।
मासद्वितयमात्रेण ददाति विपुलं बलम्॥
(र.त. 21/38)

To improve the physical strength and virility $^1/_2$-2 Ratti Swarna Makshika added with Vamsalochana Churna and administered for two months along with Madhu.

Ashuddha Apakwa, Avidhi Sevanajanya Vyadhi

अशोधितं वाऽमृतमप्यशुद्धं निषेवितं माक्षिकमक्षिबाधाम्।
मन्दानलं कुष्ठहलीमकदीन् कोष्ठानिलं वैजनयोन्नितान्तम्॥
(र.त. 21/6)

Swarna Makshika used as Ashuddha causes Netra Vikruti, Mandagni, Kushta, Halimaka and Vata Prakopaka Vikara.

Shanti Upaya

कुलत्थस्य कषायेण माक्षीक विकृति जयेत्।
दाडिमस्य त्वचो वाऽपि प्रोक्ता विकृतिनाशिनी॥
(वृ.र.रा.सु. माक्षिक प्रकरण)

Kulattha Kwatha or Dadima Twaka Kwatha used in Apakwa Makshika Janya Vikara.

Research update and Clinical evidence

- Neetu Singh, Prof Anand K. Chaudhary, Parmaceutico-Pharmacological study of Swarna Makshika Bhasma. Ph.D. Thesis. Department of Rasa Shastra Faculty of Ayurveda IMS BHU, Varanasi. Dec 2014.- Swarna Makshika contains sulphides of Copper and Iron and the elemental percentage is Cu 34.5%, Fe 30.5% and S as 35%. XRD studies of Swarna Makshika BHASMA (After 16 Puta) shows the presence of copper oxide and Iron oxide as major crystalline phase. EDAX study shows the presence of Fe, Cu, O, C, Mg, Al, Silica, K and Ca.
- Vigna Vyas, Manish Patel, SN Gupta. Ayurvedic management of Psoriasis vulgaris. A case report. International Journal of Ayurveda and Pharma Research, 2023:11 (6):70-75.- In their study done by Vyas Vigna et al. Swarna Makshika Bhasma along with Letitaka (Shuddha Gandhaka Churna) levigated with Amalaki fruit juice and Gomutra was administered in a dose of 500 mg BD after meal with warm water for 8 weeks in Psoriasis vulgaris (Ek-kushtha). PASI and DLQI score were assessed before and after treatment. Decrease in scaling, skin thickness, sharply marginated indurated erythematous plaque was seen after the treatment.

Swarna Bhasma

Chemical composition– Swarna Bhasma is having nano sized particles in crystalline nature as 90% pure gold.

Paul W. Sharma CP. Blood compatibility studies of Swarna Bhasma (Gold Bhasma) an Ayurvedic drug. Int. J. Ayurveda Res. 2011; 2:14-22.

Pharmacodynamics

Rasa	-	Kashaya, Tikta and Madhura
Vipaka	-	Madhura
Virya	-	Shita
Guna	-	Snigdha

Others properties- Vrushya, Hrudya, Netra, Medhya, Rasayana, Pumsavana, Visha, Kantikara.

Pharmacokinetics

Beaudet, D, Badilescu, S. Kuruvinashetti, K. et al. Comparative study on cellular entry of incinerated ancient gold particles (Swarna Bhasma) and chemically synthesized gold particles. Sci. Rep., 710678 (2017).

Studies done by Beaudet D et al on cellular entry of Swarna Bhasma show that small IAuPs (Incinerated Gold particles) likely enter HeLa cells via receptor-mediated endocytosis, where they accumulate in vesicles, within the endo membranes system. However, large I Au Ps may enter cells by macropinocytosis and accumulate in vacuoles. In addition, I Au Ps were observed in the cytosol and

nucleus in some cells, suggesting that they had escaped from vesicles or vacuoles.

- Paul W. Sharma CP. Blood compatibility studies of Swarna Bhasma (Gold Bhasma). and Ayurvedic drug. Int J Ayurveda Res 2011; 2:14-22.
- Shakweh M, Calvo P, Gouritin B, Alphandary H. Fattal E. Uptake of biodegradable nano and micro particles by Peyer's patches after oral administration to mice. In: Proceeding of 4th World Meeting on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology. Florence, Italy: 2002.

Study done by Paul W. et al shows that Swarna Bhasma is having nano sized particles of 28-35 nm having crystalline nature was 90% pure gold as visible from X-ray diffraction and elemental analysis. It has been reported that nanoparticles exhibited a size dependent uptake from the intestine and its passage via the mesentery lymph node supply and lymph nodes to the liver. With significant absorption for particles less than 100 n m. So Swarna Bhasma having less than this size uptake of it can be assume through the intestine.

चिकित्सकीय गुण (Therapeutic properties)

मृतं सुवर्णं मधुरञ्च वृष्यं हृद्यञ्च नेत्र्यं परमञ्च मेध्यम्।
रसायनं पुंसवनोपयोगि विषापहं कान्तिकरञ्च शस्तम्॥
(र.त. 15/69)

Vrushya, Hrudya, Netra, Medhya Rasayana, Pumsavana, Vishahara and Kantivardhaka.

Avasthanusara prayoga

सितोपलासमायुक्तं सुवर्णं परिशीतितम्।
अस्थिशोषं त्वस्थिशोथं तथैवास्थिगतक्षश्रयम्॥
स्तनन्धयानां बालानां विशेषादस्थिवक्रताम्।
दारुणामस्थिपीडां च नाशयत्यविकल्पतः॥
(र.त. 15/110-11)

Swarna Bhasma along with Sita and milk is used in Asthi Shosha and Daruna Asthi Pida, Twakasthi Shotha, Asthigata Kshaya in children.

Dosage

समारभ्याष्टमाद् भागाद् रक्तिकाया भिषग्वरः।
योजयेत्तुर्यभागान्तं मृतं स्वर्णं तु कालवित्॥
(र.त. 15/81)

1/8th Ratti to $^1/_2$ Ratti (15.6 mgs– 31.2 mgs)

Anupana - Trikatu and Ghruta (R.R.S. 8/18)

Pathyapthya -

बिना बिल्वफलं चात्र सर्वमन्यत् प्रशस्यते।
(र.चू. 14/25)

Bilva Phala used as Pathya.

Sevenkala–

Morning or after food digestion.

Kala Maryada

1. मेधा वृद्धि हेतु–

सुवर्णचूर्णं परिशीलितन्तु वचामृताविश्वशतावरीभिः।
षण्मासमात्रं तु निषेवणेन मेधाभिवृद्धिं जनयोन्नितान्तम्॥
(र.त. 15/101)

Swarna Bhasma along Vacha, Guduchi, Shunthi and Shatavari for 6 months for Medha Shakti Vruddhi.

2. मृतंसुवर्णंपरिशीलयन्त्रःस्थिराविदारीवरदाजराभिः।
मासत्रयेणैव कृशाः पुमांसः प्रपुष्टदेहाश्च बहुप्रजाः स्युः॥
(र.त. 15/73)

Swarna Bhasma along with Shalaparni, Vidarikanda, Kapikacchu Beeja for three month or regular intake for Krusha, Pumsavana.

3. In Vataprakopa Jwara, Swarna Bhasma is added Rasasindura and administered daily along with Bilva Twaka Kwatha. (R.T. 15/82)
4. In Pittaja Jwara, Swarna Bhasma is added Rasasindura and administered daily along with Parpata Swarasa. (R.T. 15/83)
5. In Kaphaja Jwara, Swarna Bhasma is added Rasasindura and administered daily along with Tulasi Swarasa. (R.T. 15/84)
6. In Jirna Jwara, Swarna Bhasma is added Abhraka and administered daily along with Madhu. (R.T. 15/85)
7. In Grahani Roga, Swarna Bhasma is added Rasa Parpati and administered daily along with Anupana. (R.T. 15/86)

8. In Pandu Roga, Swarna Bhasma is added Guduchi Sattva and Loha Bhasma administered daily along with Anupana. (R.T. 15/87)
9. In Rajayakshma Roga, Swarna Bhasma is added Abhraka Bhasma, Rasa Sindura and Mukta Pisti administered daily along with Anupana. (R.T. 15/88)
10. In Shwasa Roga, Swarna Bhasma is added Amalaki Churna administered daily along with Madhu. (R.T. 15/92)
11. In Apasmara Roga, Swarna Bhasma is added Rasa Sindura, Abhraka Bhasma, and Sankhapuspi Churna administered daily along with Anupana. (R.T. 15/94)

Ashuddha Apakwa, Avidhi Sevanajanya Vyadhi

बलं च वीर्यं हरते नराणां रोगावज्रं पोषयतीह काये।
असौख्यकार्येव सदा सुवर्णमशुद्धमेतन्मरणं च कुर्यात्॥
असम्यङ् मारितं स्वर्णं बलं वीर्यं च नाशयेत्।
रोगान् करोति मृत्युं च तद्धन्याद्यत्नतस्ततः॥
(आ.प्र. 3/39-40)

Ashuddha Swarna Bhasma causes Bala, Virya Nasha, suffering from diseases and Death.

Shanti Upaya

अभयासितयामुक्तां त्रिदिनंनृभिरंगने।
हेमदोष हरीख्याता सत्यं सत्यं न संशयः॥
(वृ.र.रा.सु. p 64)

Haritaki and Sita (sugar) for three days can help to reduce the effect of Ashuddha Swarna Janya Dosha.

Research update and Clinical evidence

- Paul W. Sharma CP. Blood compatibility studies of Swarna Bhasma (Gold Bhasma). and Ayurvedic drug. Int J Ayurveda Res 2011; 2:14-22.

  Blood compatibility study of Swarna Bhasma shows that the Swarna Bhasma preparation having crystalline size of 28-35 nm did not induce any blood cell aggregation or protein adsorption. Activation potential towards complement system or plateles was negligible. These particles were also non-cytotoxic.
- Das S, Das MC. Paul R. Swarna Bhasma in cancer. A prospective clinical study. Ayu. 2012 Jul; 33(3):365-7.

  Prospective clinical study done on Swarna Bhasma in the patients of cancer. Out of 43 patients 39 received complete treatment with follow up of five years. Patients were having lung, liver, pancreas, gall bladder and rectum cancer. The response was best in rectal cancer group 70% (7/10) and was statistically significant. Lung, gall bladder and liver showed 40%, 40% and 37.5% response respectively while in case of pancreas it was 16.66%. No significant side effect was seen during the course of treatment.
- Bhaskaran JK, Patel KS, Srikrishna R. Immunomodulatory activity of Swarna Prashana (Oral administration of gold as electruary) in infants-A randomized controlled clinical trial. Ayu. 2019 Oct-Dec; 40(4):230-236.

  Study done on Swarna Prashana to evaluate its immunomodulatory activity where randomized, controlled, single-blind trial was done in 102 healthy infants. Swarna Bhasma was given with honey and Ghrita while in control group mixture of honey and Ghrita was given. Results shows that both trial and control drugs showed statistically significant changes in IgG levels. However, the number of every 4.535 infants who received Swarna Pashana was significant No adverse effects was seen during the trial or following period.

Rajata Bhasma

Chemical composition : Chemical composition of Rajata Bhasma examined by electron dispersive X-Ray spectroscopy shows the presence of silver (48.34%), Sulphur (13.99%), Oxygen (22.49%) along with carbon, silicon aluminium etc. While XRD study, when compaired with known PxRD-powder patterns of silver compounds from the International Centre for different data (ICDD)

database, Ag_2S along with AgO and Ag_2O_3 is observed.

Pharmacodynamics and Pharmacokinetics– (R.T. 16/46)

Rasa	-	Kashaya, Amla
Vipaka	-	Madhura
Virya	-	Shita
Guna	-	Snigdha, Sara, Lekhana.

Pharmacokinetics

Mukavali Sirisha, Chalivendra Vijay, Singh Balram. Physico-chemical analysis of herbally prepared silver nanoparticles and its potential as a drug bioenhancer. Open Nano: 2 (2017) 19-27.

In order to study the effect Bhasma has on the overall cell permeability of drug experiment in which retention of Alexa Flour - 488 dye (884.91 g/mol) was examined across the monolayer of epithelial cells in the presence and absence of Bhasma. The result shown the ability of Bhasma to potentially increase the rate of pare cellular transport of co-incubated molecules. Similar study done in order to quantitate the rate of paracellular transportation using BONT/A was shown to cross the epithelial cells via transcytosis. Interaction of silver nano particles with the different types of biological systems suggests that it facilitates transportation of small and large molecules across epithelial cell monolayers, possibly through loosening cell-cell tight junctions. Silver Bhasma is also having the potential to act as a bio-enhancer.

चिकित्सकीय गुण (Therapeutic properties)

सुमृतं चन्द्रलोहन्तु वयःस्थापनमुत्तम्।
वल्यं परं दाहहरं स्मृति कान्ति विवर्द्धनम्॥
तृष्णाशोष प्रशमनं परमञ्च रसायनम्।
भ्रमहारि विशेषण गर्भाशय विशोधनम्॥
(र.त.15/69)

Vayasthapaka, Balya, Dahashamaka, Smrutu and Kanti Vardhaka, Trishnanashaka, Shoshahara, Rasayana, Bhramanashaka, Garbhashaya Shodhaka. Prameha Nashaka, Madatyaya, Agnimandya, Vishaghna, Jwaraghna, Pleehodara, Hrudya Roga and Udararoga Nashaka.

Avasthanusara prayoga

1. यवानिकादेवपुष्पचूर्णेन रजतं मृतम्।
शीलितं नाशयत्पाशु कोष्ठवातं चिरोत्थितम्॥
(र.त. 16/55)

   Use of Rajata Bhasma with Ajamoda and Devapuspa (Lavanga) Churna in Purana Kosthagata Vata Avastha.
2. In Gridrasi, Vishwachi, Trika Vedana and Nadi Shula, Rajata Bhasma is added Loha, Swarnamakshika Bhasma and Rasa Sindura administered daily along Yamani and Chitrakamula Kwatha. (R.T. 16/64)
3. In Madatyaya, Rajata Bhasma is added with Rajavarta Bhasma administered daily along with Madhu. (R.T. 16/67)
4. In Prameha Roga, Rajata Bhasma is added with Trijataka Churna administered daily along with suitable Anupana. (R.T. 16/71)

Dosage

रक्तिकायास्तुरीयांशाद्रक्तिकैकमितं परम्।
मृतं तारं नियुञ्जीत बलकालाद्यपेक्षया॥
(र.त. 16/54)

Dosage- $^1/_2$ Ratti – 1 Ratti

Anupana–Chitrakamula Kashaya, Parpataka Kashaya, Ushira Kashaya, Brahmi Swarasa.

Sevenkala– Yakshma, Pandu, Udara, Arsha, Shwasa, Netra and Pitta Roga in the morning (Ay.Pr. p 363)

Kala Maryada

स्थिरात्मगुप्ताशतमूलिकाभिनिषेवितं वै खलु चन्द्रलोहम्।
मासद्वयेनैव निहन्ति कार्श्यं बलञ्च वृष्यञ्च परं प्रदिष्टम्॥
(र.त.16/74)

Rajata Bhasma with Shalaparni, Kapikacchu Beeja and Shatavari Churna for two months in Karshya Roga.

Ashuddha Apakwa, Avidhi Sevanajanya Vyadhi

आयुः शुक्रं बल हन्ति तापविड्बन्धरोगकृत्।
अशुद्धं न मृतं तारं शुद्धं मार्यमतो बुधैः॥
(र.र.स. 5/30)

Ashuddha or Apakwasa Rajata Bhasma Sevana causes Shukra and Bala Kshaya, Santapa and Vidabandha.

Shanti Upaya

शर्करा मधु संयुक्त सेवयोद्योदिनत्रयम्।
अपक्व रौप्य दोषेण विमुक्त सुखमष्णुते॥
(र.रा.मु. रौप्य प्रकरण)

Sharkara (sugar) along with Madhu (honey) for three days for Apakwa Rajata Sevanajanya Dosha.

Research update and Clinical evidence

Devi Pritika, Kashyap CP. A clinical evaluation of Rajata Bhasma and Shankhpushpi syurp as Medhya. J. Ayu. Herb Med 2019; 5(2):49-53.

Rajata Bhasma is found reported that it is non toxic to cells in contrast to pure silver nano-particles when studied its interaction with the different types of biological systems.

In their study done by Devi Pritika et al. where Rajata Bhasma and Shakhpushpi syrup was administered to evaluate the Medhya effect. Total 10 volunteers were selected for the study. During the study 100 mg OD Rajat Bhasma with luke warm water along with Shankhapushpi syurp in a dose of 10 ml BD was administered for 30 days. Improvement was seen in 6 cases while in 4 cases mild improvement was found. In remote memory statistically highly significant (<0.001) result was found.

Lauha Bhasma

Chemical composition– Red coloured Lauha Bhasma comprises of a slightly modified magnetite structure (Fe_3O_4) with a fractional percentage ratio of Fe_2+/Fe_3+ ions -40%:60%.

Fe_3O_4 and Fe_2O_3 may be accepted for chemical characterization of Lauha Bhasma.

Pharmacodynamics and Pharmacokinetics– (R.T. 20/83)

Rasa - Tikta, Kashaya
Vipaka - Madhura
Virya - Shita
Guna - Ruksha, Guru

Verma PRP, Prasad CM. Standardization and Bioavailabilty of Ayurvedic Drug Lauha Bhasma Part II comparative Bio-availability studies Anc. Sci. life; XV2 Oct. 1995;140-144.- Hypothesis on the absorption of iron says that either form of iron can be absorbed in the intestine. It is also reported that both the ionic forms of iron are highly insoluble at neutral pH. Ferric iron reacts with the compounds like fructose, ascorbic acid, citric acid and amino acids to form complexes that allow ferric iron to remain soluble at the neutral pH of intestinal fluid Lauha Bhasma (Ferric iron) with Honey (Fructose 38.2%) may get absorbed through intestinal fluid.

चिकित्सकीय गुण (Therapeutic properties)

वल्य वृष्यं जठरगदनुत् श्लेष्मपित्तामयघ्नं वर्ण्यं मेध्यं खलु किमधिकं हन्ति नानामयघ्नम्॥ (र.त. 20/83-96)

Balya, Vrushya, Udara Roga Nashaka, Kapha Pitta Rogahara, Varnya, Medhya etc. and Atisara, Galaganda, Rajorodha, Vrukka Shotha, Hrudaroga, Vishama Jwara, Phiranga, Pandu Roga, Kamala, Halimaka, Apasmara, Shweta Pradara, Madhumeha, Shosha, Sutika Jwara, Gala Kshata, Amavata, Yakruta Roga, Bhagandara, Pinasa, Amlapitta, Nadu Shula etc.

Avasthanusara prayoga

1. In Raktapitta Roga, $^1/_4$-2 Ratti of Loha Bhasma is added with Twaka, Ela, Tejapatra, Nagakeshara and Sharkara administered daily along with Vasa Swarasa. (R.T. 20/99)
2. In Kasa Roga, $^1/_4$-2 Ratti of Loha Bhasma is added with Vasa Mula Churna, Draksha kalka and Pippali Churna administered daily along with suitable Anupana. (R.T. 20/100)
3. In Shwasa Roga, $^1/_4$-2 Ratti of Loha Bhasma is added with Bharangi Churna, Shunthi, Maricha, Pippali Churna administered daily along with suitable Anupana. (R.T. 20/101)
4. In Kaphaja Roga, $^1/_4$-2 Ratti of Loha Bhasma is added with Samagandhaka Kajjali and Pippali Churna administered daily along with Madhu. (R.T. 20/102)

5. In Vataja Roga, $^1/_4$-2 Ratti of Loha Bhasma is added with Shunthi Churna administered daily along with suitable Anupana. (R.T. 20/103)
6. In Pittaja Roga, $^1/_4$-2 Ratti of Loha Bhasma is added with Rasasindura and Sharkara administered daily along with suitable Anupana. (R.T. 20/104)
7. In Shula Roga, $^1/_4$-2 Ratti of Loha Bhasma is added with Ghrutabharjita Hingu Churna, Shunthi, Maricha and Pippali Churna administered daily along with suitable Ghruta. (R.T. 20/106)
8. In Raktapitta and Amalpitta Roga, $^1/_4$-2 Ratti of Loha Bhasma is added with Amalaki Churna, Pippali Churna and Sharkara administered daily along with Vasa Swarasa. (R.T. 20/107)
9. In Bhasmaka Roga,$^1/_4$-2 Ratti of Loha Bhasma is added with Vidanga, Triphala, Musta and Apamarga Beeja Churna administered daily along with suitable Anupana. (R.T. 20/108)
10. In Mutrakruccha Roga, $^1/_4$-2 Ratti of Loha Bhasma is added with Shilajatu administered daily along with Kusa Kwatha. (R.T. 20/109)
11. In Sarvanga and Ekanga Vata Roga, $^1/_4$-2 Ratti of Loha Bhasma is added with Parada Bhasma or Rasa Sinduara subjected for one Bhavana with Katuku Swarasa and administered for two months in suitable Anupana. (R.T. 20/109)

Dosage

आरभ्य गुञ्जापादांशात् गुञ्जाद्वितयसंमितम्।
मृतं लौहं प्युञ्जीत् प्राणाचार्यः प्रयत्नतः॥
(र.त. 20/98)

$^1/_4$ Ratti – 2 Ratti

Anupana–Madhu, Ghruta, Trikatu Chuna, Triphala Churna and Haridra Chuna.

Pathyapathya-

कूष्माण्डं तिलतैलं च माषान्नं राजिका तथा।
मद्यमम्लं मसूराश्च त्यजेल्लोहस्य सेवकः॥
(आ.प्र. 3/229)

Contraindication- Kushmada, Tila Taila, Masha, Rajika, Madya, Amla, Masura.

Sevenkala

मध्ये विष्टाम्भमन्तेऽम्लपित्तं शूलं च पक्तिजम।
(र.र.स. 28/40)

In condition of Vishtambha and Amlapitta Lauha Bhasma used in between the food and Parinamashuala at the end offood.

प्रातभोजन काले वा लीढमेतद्रसायनम्॥ (र.र.स. 28/45)

At morning time, it acts as Rasayana.

Kala Maryada

घृतमधुविनियुक्तं वा हरिद्रारसाढ्यं त्वशितमिह हि लौहं वापि कट्वी शिवाभ्याम्। अपहरति विशेषान्मास मात्र प्रयोगात् सुचिरजमपि पाण्डुं कामलाञ्चातिघोराम्॥ (र.त. 20/112)

In Pandu Roga, $^1/_2$-2 Ratti of Loha Bhasma is added with Ghruta, Madhu or Haridra Swarasa or Katuki and Haritaki Churna administered for one months in suitable Anupana.

Ashuddha Apakwa, Avidhi Sevanajanya Vyadhi

अशुद्ध लौहं न हितं निषेवणादामुर्बलं कान्तिविनाशि निश्चितम्। हृदि प्रपीडां तनुते ह्यपाटवं रूजं करोत्येव विशोध्य मारयेत्॥ (र.र.स. 5/116)

Ashuddha Lauha Bhasma causes Ayu, Bala, Kanti Nasha,Hrudyapida, Sharira Krushata etc.

Shanti Upaya

मुनिरस पिष्ट विडङ्ग मुनिरस लीढ़ं चिरं स्थितं धर्मे।
(आ.प्र. 3/230)

Agasta Swarasa along with Vidanga for licking.

Research update and Clinical evidence

- Sarkar PK. Prajapati PK. Choudhary AK, Shukla VJ, Ravi Shankar B, Haematinic evaluation of Lauha Bhasma and Mandura Bhasma on HgCl2. Induced Anemia in Rats; IJPS, Nov. Dec 2007; 791-795.

  In their study done by Sarkar et.al Anemia was induced in rats by administering mercuric chloride solution. Analysis of the data obtained for the haematinic study shows that Loha Bhasma and Mandura Bhasma both possess

significant haematinic activity.

- Ugale S., Bouude M. Rath SK. Evaluation of Pippali (Piper Longum Linn) and Lauha Bhasma on blood haemoglobin level. Journal of Ayurveda Vol XII (2) APR-Jun 2018.60-65.

  Clinical study done by Ugale S. et al. to evaluate the effect of Pippali and Lauha Bhasma on blood haemoglobin level. Total 30 healthy voluntaries were registered and divided into three groups. Group A were given 1 gm Pippali powder bd after food with water. In group B Lauha Bhasma in a dose of 125 mg bd with water after food while in group C Pippali (19 m) along with Lauha Bhasma 125 mg Bd with water after food was administered. Significant result was obtained in Group A while highly significant result were observed in Group B and C. Most effective result 18.93% improvement in Hb level was observed in Group C.

Tamra Bhasma

Chemical composition– Cupric oxide along with 30 elements, Cupric oxide and Minor phase, Copper manganese oxide ($CuMH_2O_4$) Copper sulphate hydroxide [$Cu_4SO_4(OH)_6$] and Copper Sulphide (CuS) Bhasma was prepared by taking Kajjali as Marana Dravya.

Ref- Reddy S. Chaudhary AK, Prajapati PK, Subrata De. Ravi shankar B. Comparative pharmaceutico pharmaco clinical study of Tamra Bhasma (Prepared by applying different Rasa Bhasma) wsr to its effect on Sthaulya. PG Dissertation submitted to Gujarat Ayurved University Jamnagar 2006.

Ref- Jagtap CY, Prajapati PK, Patgiri B, Shukla VJ. Standard manufacturing procedure of Tamra Bhasma. Ayu. 2012 Oct; 33(4):561-8.

Pharmacodynamics and Pharmacokinetics

ताम्रं तिक्तं तुवर मधुरं पाकतश्चोष्णवीर्यं त्वक्लं स्निग्धं.....॥ (र.त. 17/45)

Rasa - Tikta, Kashaya and Madhura
Vipaka - Katu
Virya - Ushna
Guna - Snigdha and Lekhana

चिकित्सकीय गुण (Therapeutic properties)

ताम्रं दीपनंमुत्तमं कृमिहरं कुष्ठामयध्वसनं कासश्वासविधूननं क्षयहरं पाण्डुवामयघ्नं परम् । (र.त. 17/46)

Dipana, Kriminashaka, Kushtharoga Nashaka, Shwasa, Kasa, Kshaya, Pandu Roha, Netra Roga, Sthoulya Roga Nashaka, Jwarahara, Vranan-ashaka, Ruchikara etc.

Avasthanusara prayoga (R.T. 17/53-93)

ताम्र समस्वर्णयुतं जटामांसीरजोऽन्वितम् ।
शीलितं विनिहन्त्याशु त्वाक्षेपमति दारुणम् ॥
प्रवद्ध मुष्टिकं काममानीलाननमण्डलम् ।
पानाशनादिसमये घुर्घुरायित कण्ठकम् ॥
अत्यल्पकालिकं वापि दारूणं दैर्घकालिकम् ॥
(र.त. 17/75-77)

Tamra Bhasma along with Swarna and Jatamamsi Churna cures Akshepa.

1. In Murccha Roga, $^1/_2$ half Ratti Tamra Bhasma added with Nagakeshara Churna administered daily along with cold water. (R.T. 17/54)
2. In Bhrama Roga, $^1/_2$ half Ratti Tamra Bhasma added with Ghruta administered daily along with Duralabha Kwatha. (R.T. 17/55)
3. In Pittaja and Kaphaja Roga, $^1/_2$ half Ratti Tamra Bhasma added with Nagakeshara Churna administered daily along with suitable Anupana. (R.T. 17/56)
4. In Plihodara Roga, $^1/_2$ half Ratti Tamra Bhasma added with Trikatu Churna and Shankha Bhasma administered daily along with suitable Anupana. (R.T. 17/57)
5. In Sutika Roga, $^1/_2$ half Ratti Tamra Bhasma added with Karpura, Jiraka Churna administered daily along with suitable Anupana. (R.T. 17/58)
6. In Agnimandya condition, $^1/_2$ half Ratti Tamra Bhasma added with Trikatu Churna administered daily along with suitable Anupana. (R.T. 17/59)

7. In Amlapitta Roga, $^1/_2$ half Ratti Tamra Bhasma added with Amalaki Churna administered daily along with cold water. (R.T. 17/60)
8. In Kasa and Shwasa Roga, $^1/_2$ half Ratti Tamra Bhasma added with Bharangi Churna, and Bibhitaki Churna administered daily along with Madhu. (R.T. 17/61)
9. In all types of Arsha Roga, $^1/_2$ half Ratti Tamra Bhasma added with Nagakeshara, Haritaki Churna administered daily along with Madhu for one month. (R.T. 17/62)
10. In all types of Hikka Roga, $^1/_2$ half Ratti Tamra Bhasma added with Swarna Makshika Bhasma administered daily along with Nimbu Swarasa. (R.T. 17/62)

Dosage

अष्टमांशाद्रक्तिकाया रक्तिकार्द्धमितं परम्।
मृत ताम्रं प्रयुञ्जीत बलकालद्यपेक्षया॥
(र.त. 17/52)

1/8 Ratti –1/2 Ratti

Anupana–Trikatu Kwatha, Ghruta, Madhu, Adraka Swarasa, Guduchi Swarasa (AFI Part I)

Pathyapathya–Amla Rasa Dravya

Sevenkala–Morning and after food digestion.

Kala maryada –Pleeha Roga Tamra Bhasma can be use one month.

कटुत्रिकाढ्यं मृतशङ्खयुक्तं गुञ्जार्द्धमात्रं खलु सूर्यलोहम्।
प्लीहानमत्युग्ररूजं समन्ताद् निहन्ति मासैक निषेवणेन्॥
(र.त. 17/57)

$^1/_2$ Ratti Tamra Bhasma with Trikatu, Shankha Bhasma for one month in Pleeha Vruddhi.

अशुद्ध, अपक्व, अविधि सेवनजन्य व्याधि

दाहः स्वेदोऽरुचिमूर्च्छा क्लेदो रेकोवमिर्भ्रमः।
असम्यछोधिते दोषास्ताम्रेऽसम्यक् च मारिते॥
(आ.प्र. 3/147)

Ashuddha Tamra Bhasma Sevana causes Daha, Sweda, Aruchi, Murccha, Kleda, Rechana, Vamana and Bhrama.

Shanti Upaya

मुनिब्रीहिं सितापानं धान्यकं वा सितासह।
ताम्रदोषमशेषं वै पिवान्यहयाद्दिनत्रयम्॥
(वृ.र.रा.सु. ताम्र प्रक. पेज 74)

Dhanyaka Swarasa and Sita for three days cures the Tamra Dosha Janya Vikara.

Research update and Clinical evidence

- Acute toxicity study done on Tamra Bhasma shows no mortality even at 30 TED and 180 TED levels. While Tamra Bhasma prepared from Ashuddha Tamra was reported toxic even at TED levels.

  Jagtap CY, Prajapati, PK, Patgiri B, Shukla VJ, Ravi Shankar B. Role of Shodhan in preparation of Tamra Bhasma with respect to its anti-hyperlipidemic activity. PG Dissertation submitted to Gujarat Ayurved University Jamnagar. 2011.
- Tamra Bhasma has been clinically trialed in Shwasa, Kasa, Yakrita Pliha Vriddhi etc. The dose administered was in a range of 65 mg to 250 mg. Results show the decrease in the intensity of signs and symptoms in all the studies.

  Chaudhari SY. Jagatap CY. Galib R. Bedarkar PB, Patagiri B. Prajapati PK. Review of research works done on Tamra Bhasma (Incinerated copper) at Institute for Post-Graduate Teaching and Research in Ayurveda, Jamnagar, Ayu. 2013 Jan; 34(1)21-5.

Vanga Bhasma

Chemical composition–SnO_2

Pharmacodynamics and Pharmacokinetics

वङ्गं मृतं लघु सरं शिशिरञ्च रूक्षम्।
मेध्यं सतिक्त तुवरं लवणञ्च किञ्चित्॥
(र.त. 18/39)

Rasa- Tikta, Kashaya, Kinchita Lavana

Guna- Laghu, Shitala, Ruksha.

In Vitro bio-accessibility determinization study

of Vanga Bhasma shows that its gastrointestinal percent is more as compared to gastric digestion- Kale B, Rajurkar N. Synthesis and characterization of Vanga Bhasma. J. Ayurveda Integr Med. 2019 Apr-Jun; 10(2): 111-118.

चिकित्सकीय गुण (Therapeutic properties) (R.T. 18/47-67)

Pandu, Gulma, Agnimandya, Ajirna, Urdhwa Vayu, Mukha Roga, Virya Stambhana, Shukravruddhikara, Twaka Roga, Vandhyantva, Jirna Jwara along with different Anupana.

Avasthanusara prayoga

1. मृतन्तु वङ्ग परिशीलितन्तु विनाशयेन्नातिचिरेण नूनम्।
चिरोत्थितं श्वासनली विलग्नं कफं प्रवृद्धं मलनामधेयम्॥
(र.त. 18/43)

Vanga Bhasma help in removes the Kapha Dosha adhered to the walls of respiratory tract.

2. ताप्य तार समायुक्तं वङ्गं तु परिशीलितम्।
ऊर्ध्वजत्रु समुद्भूतं नाडी शूलं व्यपोहति॥
(र.त. 18/67)

In condition of Nadishula in Urdhwajatru, one to 2 Ratti of Vanga Bhasma is added with Swarna Makshika Bhasma and Rajata Bhasma administered daily.

3. In Prameha Roga, one to two Ratti of Vanga Bhasma is administered daily along with Guduchi Sattva and Madhu for a month. (R.T. 18/47)
4. In Pandu Roga, one to two Ratti of Vanga Bhasma is administered daily along with Ghruta. (R.T. 18/48)
5. In Gulma Roga, one to two Ratti of Vanga Bhasma is added with Tankana Churna is administered daily along with suitable Anupana. (R.T. 18/49)
6. In Agnimandya Roga, one to two Ratti of Vanga Bhasma is added with Pippali Churna is administered daily along with suitable Anupana. (R.T. 18/50)
7. In Ajirna, one to two Ratti of Vanga Bhasma is added with Puga Phala Churna is administered daily along with suitable Anupana. (R.T. 18/51)
8. In Urdhwa Vayu and Raktapitta, one to two Ratti of Vanga Bhasma is added with Haridra Churna is administered daily along with suitable Anupana. (R.T. 18/52)

Dosage

रक्तिकातः समारभ्य रक्तिद्वितयसंमिताम्।
पूर्ण मात्रां प्रयुञ्जीत मृतवङ्गस्य कोविदः॥
(र.त. 18/46)

1 Ratti-2 Ratti(125mg-250mgs)

Anupana- Ghruta, Tulasi Swarasa, Madhu

Pathyapathya

शालयो मुद्ग सूप च नवनीत तिलोद्भवम्।
पटोलं तिक्ततुंडीरं तक्रं पथ्याय शस्यते॥
(र.ज.नि. 3/2)

Shali, Mudga Supa, Navanita, Tila, Patola, Tikta Dravya and Takra.

Sevenkala

सुवर्ण वंगं मधुना वासरे तु दिवारकम्॥
(र.त. 18/94)

Administered twice daily for a month.

Kala Maryada-

तालमूसिकपोपेतं वङ्गन्तु परिशीलितम्।
मास मात्र प्रयोगेण शुक्रतारत्याहृत्परम्॥
(र.त. 18/65)

To improve the Shukra, one to 2 Ratti of Vanga Bhasma is added with Musali Churna administered daily for one month.

Ashuddha Apakva Avidhi Sevana Janya Vyadhi

अशुद्धममृतं वङ्ग प्रमेहादिगणप्रदम्।
गुल्म हृद्रोग शूलार्शः कासश्वासवमि प्रदम्॥
(आ.प्र. 3/154)

Ashuddha Vanga Bhasma causes Prameha, Gulma, Hrudaya Roga, Shula, Arsha, Kasa, Shwasa and Vamana.

Shanti Upaya

मेषशृङ्गीसितायुक्तां यः सेवेत दिनत्रयम्।
वङ्गदोषविमुक्तोऽसौ सुखं जीवति मानव॥
(वृ.र.रा.सु. वंग प्रकरण पेज 78)

Meshashrunga, Sita for three days can cure the Vanga Dosha Vyadhi.

Research update and Clinical evidence

- Vanga Bhasma treatment did not influence the blood glucose in normal rats but normalized the impaired glucose tolerance and alloxan-induced hyperglycaemia on long term treatment. Vanga Bhasma on prolong administration exhibits antihyperglycemic effect. Glimpses of CCRAS contributions, Vol. VI Pharmacology Research and Safety Studies.
- Study done by B Kala et.al it was found that Vanga Bhasma prepared by traditional method of heating was having crystalline size of 52.64 nm while Bhasma prepared by electric muffle furnace heating was having crytalline size of 61.27 nm. Kale B, Rajurkar N. Synthesis and characterization of Vanga Bhasma. J. Ayurveda Integr Med. 2019 Apr-Jun; 10(2):111-118.
- **Clinical Evidence–** Study done by Patgiri B.J. et al where total 64 patients of Madhumeha type 2, DM were divided in two groups i.e. A and B. Group A (32 patients) treated with Vanga Bhasma 250 mg with Guduchi Ghana 250 mg with old honey 3 ml while in group B (32 patients) were given Guduchi Ghana (250 mg) and old honey (3 ml) for 28 days. It was found that Vanga Bhasma with Guduchi Ghana was found moderate anti-hyperglycemic activity in the patients of Madhumeha (Type II DM). Patgiri BJ. Parmar DK. Prajapati PK. Clinical Evaluation of Vanga Bhasma in the management of Madhumeha (Type-2 Diabetes Mellitus) J. Res. Educ. Indian Med. April June 2014; XX (2):67-73.

Naga Bhasma

Chemical composition– XRD studies shows that Naga Bhasma contains lead and Sulphur. It also shows the presence of Carbon and Oxygen. Here in the study AS2S2 was used as Maraha Dravya. Singh SK, Gautam DNS, Kumar M, Rai SB. Synthesis, Characterization and Histopathological study of a lead-Based Indian Traditional Drug: Naga Bhasma. Indian J. Pharm. Sci., 2010, 72 (1):24-30.

Pharmacodynamics and Pharmacokinetics

मृतन्तु सीसं मधुरञ्च तिक्तं स्निग्धं तथोष्णं गुरु लेखनञ्च ।
सरं.....॥ (र.त. 19/43)

Rasa - Madhura, Tikta

Guna- Snigdha, Lekhana, Sara, Ushna

चिकित्सकीय गुण (Therapeutic properties)

प्रमेहकरि केशरी पवनरोगकालानलः ।
ग्रहण्यति निशारूणः खलु गुदाङ्कुरेभाङ्कुशः ॥
बलासगदतस्करो व्रणगणौकसङ्कर्षणः ।
परं विजयतेतरां गदहरो भुजङ्गा मृतः ॥
(र.त. 19/44)

It is useful in curing Prameha, Vata Vyadhi, Grahani, Arsha, Kapahaja Roga, all types of Vrana.

Avasthanusara prayoga (R.T. 19/47-55)

1. In Prameha Roga, one Ratti of Naga Bhasma is added with 2 Ratti of Haridra Churna, Amalaki Churna administered daily along with Madhu. (R.T. 19/47)
2. In Rakta Pradara Roga, one Ratti of Naga Bhasma administered daily along with Ashoka Twaka Kwatha. (R.T. 19/48)
3. In Rakta Arsha Roga, one Ratti of Naga Bhasma is added with 4 Ratti of Nagakeshara Churna administered daily along with suitable Anupana. (R.T. 19/49)
4. In Vataja Prameha Roga, one Ratti of Naga Bhasma is added with Guduchi Sattva administered daily along with Madhu. (R.T. 19/50)
5. In Antra Shotha Roga, one Ratti of Naga Bhasma is added with Swarna Bhasma, Rasasindura and Tamra Bhasma administered daily along suitable Anupana. (R.T. 19/51)
6. In Vrukka shotha Roga, one Ratti of Naga Bhasma is administered daily along

Kapikacchu Mula, Bala mula and Jatamamsi Kwatha (R.T. 19/52)

7. In Pakshaghata Roga with Kampa, one Ratti of Naga Bhasma is added with Swarna Bhasma, Rasasindura and Tamra Bhasma administered daily along suitable Anupana. (R.T. 19/53)
8. In Pakshaghata Roga with muscle looseness, one Ratti of Naga Bhasma is added with Yashada Bhasma, Rajata Bhasma administered daily along Prasarani, Balamula, Rasna and Kapikacchu Mula Kwatha. (R.T. 19/54-55)

Dosage-

पादांशतो शक्तिकाया रक्तिकैकमितं शुभम्।
मृतं सीसं प्रयुञ्जीत बलकालाद्यपेक्षमा॥
(र.त. 19/46)

1/4 Ratti-1 Ratti(31mg-125 mgs)

Anupana- Madhu

Sevenkala–Twice daily

Ashuddha Naga Seven Janya Dosh

अशुद्धः कुरुते नागः प्रमेहक्षय कामलाः।
तस्मात्संशुद्ध एवायं मारणीयो भिषग्वरैः॥
(आ.प्र. 3/188)

Ashuddha Naga Bhasma causes Prameha, Kshaya and Kamala Roga.

Apakwa Naga Seven Janya Dosh

पाकेन हीनौकिल नागवङ्गौ कुष्ठानि गुल्मांश्च तथाऽतिकष्टान।
पाण्डु प्रमेहानलसादशोथ भगन्दरादीन् कुरुतः प्रयुक्तौ॥
(आ.प्र. 3/189)

Apakwa Naga Bhasma causes Kustha, Gulma, Pandu, Prameha, Agnimandya, Bhagandara.

Shanti Upaya

अविशुद्धामृताह्युत्थविकारपरिशान्तये।
विशुद्धगन्धं चूर्णन्तु योजमेद् भिषजां वरः॥
(र.त. 19/93)

Shuddha Gandhaka should be administered daily as antidotes to brings down Ashuddha Naga Bhasma Dosha.

Research update

Study done by Verma Ashish et al. it was found that partial conversion of Naga (Pb) into PbO occurs during the Shodhana process while it is converted into PbS when this Shodhita powder subjected to Marana using AS2S2 Manhshila as Maraka Dravya. Verma A Bedarkar P, Galib, Patgiri BJ, Prajapati PK, Standardization of Naga Bhasma prepared by two different Bhawana Dravya. J Phytopharmacol 2016:5(5):208-214.

Experimental study on antihyperglycemic effect of Naga Bhasma incinerated lead shows that Naga Bhasma (Prepared from Parada Marita and Herbal media) have no hypoglycaemic action but it has moderate antihyperglycemic effect. Bharat R, Rajput DS Rathi R. A Brief Review of Published Research Works on Naga Bhasma. IJAAR II (9) Sep-Oct. 16 1346-1356.

Clinical Evidence- Clinical trial done on Garbhapala Rasa, containing Naga Bhasma as Chief ingredient, in 170 pregnant women shows normal haematological picture, maintained renal and liver function tests and non toxic nature of Garbhapala Rasa in Pregnancy. J Res Educ. Indian Med, Jan-March, 2012 XVIII(1):13-19.

Yashada Bhasma

Chemical composition–ZnO (Hexagonal) as a major crystalline phase.

Patil S., Chaudhary AK, Characterization of Yashad Bhasma (Zinc calyx) and establishment of the importance of Shodhan (Purification). Indian J Nat Prod Resour, 12(2);June 2021.291-299.

Pharmacodynamics and Pharmacokinetics (R.T. 19/120)

Rasa - Kashaya, Katu

Guna- Shita Guna

- Bioavailable zinc ions are mainly absorbed by small intestine region enterocytes, metabolized and translocated to the systemic circulation reaching the distal organs. ZnO nanoparticles have been reported to dissolve at pH between

2-4 that are physiologically present in the stomach region of GIT and lysosomes. Study done on JB Cycle 17 [Jasada Bhasma 17 puti) nanoparticles show that it is capable of releasing the bioavailable form of Zn++ ions for intra cellular metabolism and release into systemic circulation similar to other zinc nanoparticles.

- Antioxidant activity of a substance can be performed in 2 ways-by enhancing the synthesis of cellular antioxidants such as SOD, peroxidase and by scavenging the reactive oxygen species. Yashad Bhasma by enhancing the synthesis of SOD and peroxidase induced its antioxident effect. (Bhomick et.al. 2009a).

References

- Krebs, NF Overview of zinc absorption and excretion in the human gastrointestinal tract. J. Nutr. 2000, 130, 1374 S - 1377 S.
- Zeng, J.; Shirihai, O.S; Grinstaff, M.W. Modulating lysosomal pH : a molecular and nanoscale materials design perspective. J. Life Sci. (Westlake village) 2020, 2, 25-37.
- Balkrishna. A; Singh A; Sing J.; Pokkrel, S.' Bhattacharya, K.; Varshney, A. Anti-obesity activity of polyherbal formulation Divya Medohar Vati by inhibition of pancreatic lipase activity and trigly ceride translocation through enterocytes. Phytomedicine Plus 2022, 2, 100194.
- Balkrishna A, Sharma D, Sharma RK, Bhattacharya K, Varshney A. Investigating the Role of classical Ayurveda - Based Incineration process on the synthesis of Zinc Oxide based Jasad Bhasma Nano particles and Zn++ Bioavailability. ACS Omega. 2023 Jan 9; 8(3): 2942-2952.

चिकित्सकीय गुण (Therapeutic properties)

यशदं पाण्डुशमनं बहुमेहानिषूदनम्।
कासश्वासप्रशमनं निशास्वेद निबर्हणम्॥
यशदं परमं श्लेष्म कलासंकोच कृन्मतम्।
समाख्यातं विशेषेण व्रणसंस्त्रावरोधनम्॥
श्रमावसादशमनं रजःस्त्राव निषूदनम्।
कम्पवातापहं चैव विशेषात्परिकीर्तितम्॥
(र.त. 19/121-123)

Yashada Bhasma is useful in Pandu Roga, Bahu Mutra Meha, Kasa, Shwasa, Rajayakshama and Jirna Jwara associated with Nesha Sweda, Shleshma Kala Sankocha. Vranastrava Rodhaka, Shramasada Shamaka, Rajastrava, Kampavata.

Avasthanusara prayoga

1. In Tridosha Prakopa condition, half to one Ratti of Yashada Bhasma is added with Ela Churna, Twaka Churna, Tejapatra Churna administrated daily along with suitable Anupana. (R.T. 19/126)
2. In Agimandya condition, half to one Ratti of Yashada Bhasma is added with Aranimula Twaka Churna administrated daily along with suitable Anupana. (R.T. 19/127)
3. For Drushti Vardhana, half to one Ratti of Yashada Bhasma is added with one year old Ghruta administrated daily. (R.T. 19/128)
4. In Pratishyaya condition, half to one Ratti of Yashada Bhasma is added with Ghruta administrated daily for Nasya. (R.T. 19/129)
5. In Kasa, Shwasa and Ksayaja condition, half to one Ratti of Yashada Bhasma is added Abhraka Bhasma administrated daily along with suitable Anupana. (R.T. 19/127)
6. In Pakshaghata associated with Kampa, half to one Ratti of Yashada Bhasma administrated daily along with Kapikacchu Beeja, Rasna, Bala and Eranda Mula Kwatha. (R.T. 19/134)
7. In Shweta Pradara condition, half to one Ratti of Yashada Bhasma is added Loha Bhasma and Sarjarasa Churna administrated daily along with suitable Anupana. (R.T. 19/140)
8. टङ्काभ्रवंशजायुक्तं यशदं परिशीलितम्।
श्वासं निवारयत्याशु संकष्टं कफनिर्गमम्॥
(र.त. 19/142)

Yashada Bhasma along with Shuddha Tankana, Abhraka Bhasma, Vamshalochana useful in Shwasa Roga.

Dosage-

गुञ्जार्द्धतः समारभ्य गुञ्जैकप्रमितं मृतम्।
यशदं विनियुञ्जीत बलकालाद्ययेक्षया॥
(र.त. 9/125)

1/2 Ratti-1 Ratti (62mg-125 mgs)

Anupana-Goghruta, Sita, Tambaula Swarasa.

Sevenkala–Twice daily

Kala Maryada-

लिप्ता यशदवि भूतिर्गव्येनाभूतिर्गव्येनाज्येन चात्र सप्ताहम्।
नाशयतीह निकामं चिरजामपि विचर्चिकामचिरान्॥
(र.त. 19/132)

Yashada Bhasma along with Ghruta Lepa for seven days is useful Vicharchika.

Ashuddha Apakwa, Avidhi Sevanajanya Vyadhi

विशुद्धिहीनं यशदं मृतञ्चेद् विशोधितं वाप्यमृतं त्वविज्ञैः।
निषेवितं वै जनयेद् विकारान् गुल्मञ्मेह क्षयकुष्ठकादीन्॥
(र.त. 19/97)

Ashuddha Yashada Bhasma causes Gulma, Prameha, Kshaya and Kushta Vikara.

Shanti Upaya

बलाभया सितायुक्तां सेवते यो दिनत्रयम्।
यशदस्य विकारस्तु शान्तिमायतिनान्यथा॥
(र.रा.सु. जसद प्रक.)

Bala, Haritaki, Sharkara for three days reduce the Ashuddha Yashada Bhasma Sevana Vikara.

Research update

- Yashada Bhasma has been reported to increase virility and intelligence. It has shown its role in the treatment of myopia.

  RL Khosa and SN Dixit. Ayurvedic Zinc preparation (Jasad Bhasma) J Res Indian Med 6.222-225 (1971).

  RN Puri, V Thakar and HV Neema. Role of Zinc (Yashad Bhasma) in arrest of myopia, Indian, J Ophthalmol. 31 (Suppl) 816-822 (1983)

- **Clinical evidence-** Clinical study done by Srinivas P et al. on 193 patients of Type 2 Diabetes Mellitus Madhumeha). In the study first group was treated with Nisha Katakadi Kashaya 15 ml while second group with Yashad Bhasma capsule of 125 mg and in third group Nisha Katakadi Kashaya 15 ml along with Yashada Bhasma 125 mg was given. Duration of study was 12 weeks. Based on this study it is inferred that treatment with all the three has good efficacy in the management of Type 2 DM.

  Srinivas P, Subhose V, Deep VC, Sharma SK, Ota S, Prasad AJVS Babu G, Radha Krishnan P, Sharma OR, Dua P, Rana R, Singhal R, Narayana MS, Clinical evaluation of Nisha Katakadi Kashaya and Yashada Bhasma in Management of Type-2 DM (Madhumeha)- A multicentric Open level Prospective study. J Res Ayurvedic Sci 2018; 2(2):108-121.

Kasisa Bhasma

Chemical composition– Fe2O3, hydrated metal salt of oxide [FeO/Fe2O3] as studied by FITR of Kasia Bhasma.

Rasheed A. Y Raju Prassana, D Jamal Basha, M. Avanesh, Azeem AK. Process and Pharmacological potentials of Kasisa Bhasma a Herbo mineral formulation with calcinated ferrous sulphate. Jordan Journal of Pharmaceutical Sciences, 9(2);2016:141-154.

Pharmacodynamics and Pharmacokinetics

कासीसं तुवरं ग्राहि विपाकोष्णन्तु शीतलम्।
(र.त. 21/231)

Rasa - Kashaya
Guna - Grahi
Vipaka - Ushna/Shita

चिकित्सकीय गुण (Therapeutic properties)

श्वित्रघ्नं नेत्र्यमतुलं विषघ्नं केशरञ्जनम्॥
वातश्लेषमामायहरं मूत्रकृच्छ्रप्रणाशनम्।
कण्डूपाण्डुकृमिघ्नञ्च रक्तसञ्जननं परम्॥
रजः प्रवर्तकं बल्यं ज्वरघ्नं प्लीहानाशनम्।

वाह्य प्रयोगे विज्ञेयं सङ्कोचनकरं परम् ॥
(र.त. 21/231-233)

Kasisa Bhasma is useful in Shwitra, Netra Roga, Vishaghna, Kesharanjana, Kaphavata Rogahara, Mutrakruccha, Kandu, Pandu, Krimiroga, Rajapravartaka, Balya, Jwaraghna, Pleeharoga and Rakta Sanjanana.

Avasthanusara prayoga

1. In Pleeha Roga, half to two Ratti of Kasisa Bhasma is added with Sarapunkha Kshara and administrated daily along with warm water. (R.T. 21/243)
2. In Rajo Avarodha condition, half to two Ratti of Kasisa Bhasma is added with Shuddha Tankana and Kumari Sara Churna administrated daily along with suitable Anupana. (R.T. 21/244)
3. In Rakta Alpaja Hrudya Vyatha condition, half to two Ratti of Kasisa Bhasma is added with Twaka Churna and Ela Churna administrated daily along with suitable Anupana. (R.T. 21/245)
4. In Visarpa Roga, half to two Ratti of Kasisa Bhasma is added with water in 2:3 ration daily over the affected part. (R.T. 21/246)

Dosage-

गुञ्जार्द्धतः समारभ्य रक्तिकाद्वियोगन्मिता ।
कासीसकस्य कथिता पूर्णमात्रा भिषग्वरैः ॥
(र.त. 21/242)

1/2 Ratti-2 Ratti (62mg-250 mgs)

Anupana - Madhu

Sevenkala- Twice daily

Kala Maryada -

धत्तूरगुञ्जाबीजाढ्यः छागस्तु परिलेपितः ।
मासद्वय प्रयोगेण श्वित्रं हन्ति चिरोत्थितम् ॥
(र.त. 21/252)

Kasisa Bhasma is useful along with Dhattura Beeja and Gunja Beeja Churna lepa for two months in Shwitra Roga.

Research update

- Kasisa Bhasma was found nontoxic and safer when it is compared to Shodhita Kasisa. It can be administered at a controlled dose to affect therapeutic efficacy.

  Palbag, Satadru; Saha, Dhiman, Gautam, Dev Nath Singh. Toxicity studies of iron-containing ayurvedic drug Kasia Bhasma. BLDE University Journal of Health Sciences 1(1):p 39-43, Jan-Jun 2016.
- **Clinical evidence-** Study done by Patel Bhavesh et al it was observed that in the patients of Pandu Kasisa Bhasma gives slightly more symptomatic relief when it is compared to Lauha Bhasma.

  Bhavesh H Patel, PK Prajapati, AK Chaudhary, B Ravishankar. A comparative pharmaceutico-pharmaco, clinical study of Kasisa Bhasma (Prepared by three different methods) wsr to its effect on Pandu Roga (Iron Deficiency Anaemia) Dissertation submitted for Degree of Doctor of Medicine (Ayu.) IPGT&RA, Gujarat Ayurved University Jamnagar 2006.

Shuddha Shilajatu

Chemical composition/Phytochemical composition

Composition of Shilajit is considered as phytocomplex, very rich in fulvic acid. Research hypothesize that it is produced by the decomposition of plant material from species such as Euphorbia royleana and Trifolium repens. Shilajit is compared of three primary chemical units-

1. Low and medium molecules weight non-humic organic compounds comprising free and conjugated (e.g. fatty, acyl, aminoacyl, lipoidal) dibenzo-a-pyrones.
2. Medium and high molecular weight DCPs (Dibenzo-a-pyrons chromo proteins) containing trace metal ions along with carotenoids and indigoids as colouring agent.
3. Metallo-humates like fulvic acids and fusims with dibenzo-pyrones in their core nucli.

- Wilson E et al. Review on Shilajit used in

traditional Indian Medicine. Journal of Ethno pharmacology Vol 136 issue 1; 14 June 2011; p 1-9.

- Carraasco-Gallandoc, Guzman L. Maccioni RB-Shilajit-a natural phyto complex with potential procognitive activity. Int. J. Alzheimers Dis. 2012; 2012:674142.

Pharmacodynamics– (C.Ci. 1/3/56-59)

क्रम.	भेद	रस	वीर्य	विपाक	दोषहनता
1.	स्वर्ण शिलाजतु	मधुर तिक्त	शीत	कटु	वात पित्तनाशक
2.	रजत शिलाजतु	कटु	शीत	मधुर	कफ पित्तनाशक
3.	ताम्र शिलाजतु	तिक्त	उष्ण	कटु	कफनाशक
4.	लौह शिलाजतु	तिक्त लवण	शीत	कटु	त्रिदोषनाशक

शिलाजतु मतं तिक्तं विपाके कटुकं तथा।
मूत्रलञ्च विशेषेण योगवाहि रसायनम्॥
(र.त. 22/84)

Rasa - Tikta
Vipaka - Katu
Guna - Yogavahi, Rasayana
Virya - Shita

चिकित्सकीय गुण (Therapeutic properties)

न सोऽस्ति रोगो भुनि साध्य रूपः शिलाह्वयं यं न जयेत प्रसहा। (च.चि. 1/3/65)

Shilajatu is useful for all the Vyadhi.

शिलास्वेदो बल्यः श्वयथुशमनः पाण्डुहरणः।
क्षयश्वासप्लीहज्वरदहनमान्द्यापहरणः॥
अपस्मारोन्मादोदरगुदजकृच्छ्रप्रशमनः।
समीरस्थौल्योरःक्षतहृदयशूलैकदलनः॥
प्रमेहकरिकेशरी प्रबलशूलकालानलः।
कृमिप्रशमनः परं सुवितताश्मरीशैलभित्।
सकुष्ठवमिगुल्मजित् प्रबलवातरक्तप्रणुत् स्मृतो।
रसविशारदैः खलु शिलामयो निर्मलः॥
(र.त. 22/85-86)

Shilajatu is useful in improve Balya, Shvayathu Shamana, Pandu, Kshaya, Shwasa, Plecha, Unmada, Jwara, Agnimandya, Apasmara, Udara Roga, Arsha and Mutrakruccha. It mitigates Vata Dosha and beneficial in Sthoulya, Urakshaya, Hrudaya Roga, Prameha, Udara Shula, Udara Krimi, Mutra Ashmari, Kustha Roga, Gulma and Vata Prabala Roga.

Avasthanusara prayoga

1. In Mutrakruccha Roga, two Ratti of Shilajatu is administered daily along with Madhu. (R.T. 22/88)
2. In Mutrasthila, Vata Basti and Vata Kundalika condition, Shilajatu is administered daily along with Dashamula Kashaya and Sita. (R.T. 22/89)
3. In Mutaghata and Mutrashamari condition, Shilajatu is administered daily with Varunadi Kwatha. (R.T. 22/90)
4. In Mutaghata and Mutrakruccha condition, Shilajatu is administered daily with Amrutadi Kwatha. (R.T. 22/91)
5. In Rajayakshma condition, Shilajatu is added with Loha Bhasma, Swarna Makshika Bhasma, Ghruta and Madhu, Haritaki churna and Vidanga Churna administered daily. (R.T. 22/94)

Dosage-

पलमर्धपलं कर्षो मात्रा तस्य त्रिधा मता। (च.चि. 1/3/55)

प्रवर मात्रा - 1 पल -96 gms
मध्य मात्रा - 1/2 पल -48 gms
अवर मात्रा - 1 कर्ष -12 gms

द्विगुञ्जतः समारभ्य वसुगुञ्जमितं परम्।
शिलामयं प्रयुञ्जीत बलकालाद्यपेक्षया॥
(र.त. 21/87)

Dosage-2 Ratti-8 Ratti (500 mg- 1 gms)

Anupana- Milk, Takra, Mamsarasa, Jala. Gomutra and Kwatha Dravya. (C.Chi 1/3/64)

Sevenkala–Morning (Su.Chi. 13/10)

Pathyapathya–

शिलाजतु प्रयोगेषु विदाहीनि गुरुणि च।
वर्जयेत् सर्वकालं तु कुलत्थान् परिवर्जयेत॥
(च.चि. 1/3/62)

Vidahi, Guru Dravya and Kulattha is contraindicated.

traditional Indian Medicine. Journal of Ethno pharmacology Vol 136 issue 1; 14 June 2011; p 1-9.

- Carraasco-Gallandoc, Guzman L. Maccioni RB-Shilajit-a natural phyto complex with potential procognitive activity. Int. J. Alzheimers Dis. 2012; 2012:674142.

Pharmacodynamics– (C.Ci. 1/3/56-59)

क्रम.	भेद	रस	वीर्य	विपाक	दोषहनता
1.	स्वर्ण शिलाजतु	मधुर तिक्त	शीत	कटु	वात पित्तनाशक
2.	रजत शिलाजतु	कटु	शीत	मधुर	कफ पित्तनाशक
3.	ताम्र शिलाजतु	तिक्त	उष्ण	कटु	कफनाशक
4.	लौह शिलाजतु	तिक्त लवण	शीत	कटु	त्रिदोषनाशक

शिलाजतु मतं तिक्तं विपाके कटुकं तथा।
मूत्रलञ्च विशेषेण योगवाहि रसायनम्॥
(र.त. 22/84)

Rasa - Tikta
Vipaka - Katu
Guna - Yogavahi, Rasayana
Virya - Shita

चिकित्सकीय गुण (Therapeutic properties)

न सोऽस्ति रोगो भुनि साध्य रूपः शिलाह्वयं यं न जयेत प्रसहा। (च.चि. 1/3/65)

Shilajatu is useful for all the Vyadhi.

शिलास्वेदो बल्यः श्वयथुशमनः पाण्डुहरणः।
क्षयश्वासप्लीहज्वरदहनमान्द्यापहरणः॥
अपस्मारोन्मादोदरगुदजकृच्छ्रप्रशमनः।
समीरस्थौल्योरःक्षतहृदयशूलैकदलनः॥
प्रमेहकरिकेशरी प्रबलशूलकालानलः।
कृमिप्रशमनः परं सुवितताश्मरीशैलभित्।
सकुष्ठवमिगुल्मजित् प्रबलवातरक्तप्रणुत् स्मृतो।
रसविशारदैः खलु शिलामयो निर्मलः॥
(र.त. 22/85-86)

Shilajatu is useful in improve Balya, Shvayathu Shamana, Pandu, Kshaya, Shwasa, Pleeha, Unmada, Jwara, Agnimandya, Apasmara, Udara Roga, Arsha and Mutrakruccha. It mitigates Vata Dosha and beneficial in Sthoulya, Urakshaya, Hrudaya Roga, Prameha, Udara Shula, Udara Krimi, Mutra Ashmari, Kustha Roga, Gulma and Vata Prabala Roga.

Avasthanusara prayoga

1. In Mutrakruccha Roga, two Ratti of Shilajatu is administered daily along with Madhu. (R.T. 22/88)
2. In Mutrasthila, Vata Basti and Vata Kundalika condition, Shilajatu is administered daily along with Dashamula Kashaya and Sita. (R.T. 22/89)
3. In Mutaghata and Mutrashamari condition, Shilajatu is administered daily with Varunadi Kwatha. (R.T. 22/90)
4. In Mutaghata and Mutrakruccha condition, Shilajatu is administered daily with Amrutadi Kwatha. (R.T. 22/91)
5. In Rajayakshma condition, Shilajatu is added with Loha Bhasma, Swarna Makshika Bhasma, Ghruta and Madhu, Haritaki churna and Vidanga Churna administered daily. (R.T. 22/94)

Dosage-

पलमर्धपलं कर्षो मात्रा तस्य त्रिधा मता। (च.चि. 1/3/55)

प्रवर मात्रा - 1 पल -96 gms
मध्य मात्रा - 1/2 पल -48 gms
अवर मात्रा - 1 कर्ष -12 gms

द्विगुञ्जतः समारभ्य वसुगुञ्जमितं परम्।
शिलामयं प्रयुञ्जीत बलकालाद्यपेक्षया॥
(र.त. 21/87)

Dosage- 2 Ratti-8 Ratti (500 mg- 1 gms)

Anupana- Milk, Takra, Mamsarasa, Jala, Gomutra and Kwatha Dravya. (C.Chi 1/3/64)

Sevenkala– Morning (Su.Chi. 13/10)

Pathyapathya–

शिलाजतु प्रयोगेषु विदाहीनि गुरुणि च।
वर्जयेत् सर्वकालं तु कुलत्थान् परिवर्जयेत॥
(च.चि. 1/3/62)

Vidahi, Guru Dravya and Kulattha is contraindicated.

Kala Maryada-

प्रयोगः सप्तसप्ताहास्त्रयश्चैकश्च सप्तकः।
निर्दिष्टस्त्रिविधस्तस्य परोमध्योऽवस्तथा ॥
(च.चि. 1/3/54)

सात सप्ताह–पर प्रयोग
तीन सप्ताह–मध्य प्रयोग
एक सप्ताह–अवर प्रयोग

Ashuddha Apakwa, Avidhi Sevanajanya Vyadhi

अशुद्धंदाहमूर्च्छादीन् भ्रमपित्तास्त्रशोणितं शिलाजतु प्रकुरुते मांद्यभग्निश्चविटग्रह ॥ (र.रा.सु. 159)

Ashuddha Shilajatu causes Daha, Murccha, Bhrama, Raktapitta, Rakta Vikara, Mandagni and Malabandha.

Shanti Upaya

मरिचं घृत संयुक्तं सेवयेद्दिनसप्तकम्।
शिलाजतु भवंदोषं शान्तिमाप्नोतिनिश्चितम् ॥
(र.रा.सु.)

Maricha, Ghruta for seven days reduce the complication of Ashuddha Shilajatu.

Research updates

- Studies on Shilajatu reveal that it is usually excreted and oozed from rock crevices in the remote mountain (At the altitude ranging from 1000-5000 m) under specific conditions like extremely hot sunlight, high pressure, presence of vegetation, minerals [Cu, Zn, Ag, Fe, Mg etc.] in summer and winters.
- Chemical analysis of crude Shilajit shows the presence of Humic Acid, Fulvic Acid, Dibenzo- a - pyrones (DBPs) and Dibenzo - a - pyrones-chromo proteins (DCPs) as a major bio-chemically relevant constitutents.
- Fulvic Acid (FA) is reported that it promotes cell divison, enzymatic reactions and increases metabolism. Fulvic acid is responsible for rejuvenating and anti-aging effects of Shilajit due to its electrolyte nature, act as a carrier molecule for transporting the essential mineral across cell membranes.
- DBPs are known to protect the brain as well as nerve tissue from free-radical damage due to its property of crossing through the blood-brain barrier.
- **Clinical evidences-** Clinical trial don by Pingali V. et al. on sixty postmenopausal women age between 45 to 65 years having osteopenia were randomly divided into three groups. Group 1 were given placebo while 2 and 3 were given 250 mg Shilajit extract and 500 mg Shilajit extract respectively daily for 48 weeks. BMD of both lumber spine and femoral neck progressively decreased in women receiving placebo but was dose-dependently attenuated with Shilajit extract supplementation, resulting in significantly increased percentage change from baseline in BMD at 24 and 48 weeks in both supplemented groups compared to placebo ($P<0.001$).
  Pingali U, Nutalapati C. Shilajit extract reduces oxidative stress, inflammation and bone loss to Dose, Dependently preserve bone mineral density in postmenopausal women with osteopenia : A randomized, double-blind Placebo-controlled trial, Phytomedicine 105; Oct. 2022:154334.
- Clinical trial done on 145 healthy volunteers for consecutive 90 days revealed that it (highly significantly ($P<0.05$) increases total testosterone, free testosterone and dehydroe-pian-drosterone (DHEAS) compared with placebo. In group I Pure Shilajit 250 mg BID while in Group II Placebo 250 mg BID was given. This study was done by Pandit S et. al. Pandit S, Biswas. Jana V. De RK, Mukhopadhyay. Biswas TK. Clinical evaluation of purified Shilajit on testosterone levels in healthy volunteers. Andrologia, 48(5),570-575.2016.

Shuddha Gandhaka

Chemical composition– FTIR studies show that processed Sulphur (Shuddha Gandhaka) is a-sulphur having organic groups like sulphonyl and carbonyl.

Pharmacodynamics and Pharmacokinetics (R.T. 8/37)

Rasa - Katu and Tikta
Guna - Sara
Virya - Ushna
Vipaka - Katu

चिकित्सकीय गुण (Therapeutic properties) (A.P. 214-16) (R.T. 8/40-58)

Rasayana, Shwasa, Kasa, Agnivardhaka, Arsha Roga, Twaka Vikara, Guda Vikara, Kaphaja Roga, Rajayakshama, Virya Dosha, Pama Roga, Dadru, etc. according to.

Avasthanusara prayoga

1. Shuddha Gandhaka is applied over the affected part in Amavata and Gridrasi reduces the inflammation and pain. (R.T. 8/40)
2. Shuddha Gandhaka consumed once and twice daily in proper dosage with Triphala Kwatha beneficial in diseases of nose, ear and mouth. (R.T. 8/41)
3. Shuddha Gandhaka consumed once and twice daily in proper dosage with Vasa Kwatha will be beneficial in Kshaya Roga. (R.T. 8/42)
4. Shuddha Gandhaka consumed once and twice daily in proper dosage with Kantakari Swarasa will be beneficial in Kasa and Shwasa Roga. (R.T. 8/43)
5. Shuddha Gandhaka consumed once and twice daily in proper dosage with Kadali Phala will be beneficial in Twaka Roga. (R.T. 8/44)
6. Shuddha Gandhaka consumed once and twice daily in proper dosage with Tila Churna will be beneficial in Arsha Roga. (R.T. 8/46)
7. Shuddha Gandhaka consumed once and twice daily in proper dosage with Yashtimadu, Sita, Swarnapatri and Shatapuspa with suitable Anupana. (R.T. 8/47)

Dosage-

रक्तिकातः समारभ्य रक्तिकाष्टकसंमितम्।
प्राणाचार्यः प्रयुञ्जीत गन्धकं तु विशोधितम्॥
(र.त. 8/39)

Dosage-1 Ratti-8 Ratti (125 mg- 1 gms)

इत्थ विशुद्धास्त्रिफलाज्यभृङ्गमध्वान्वितः शाणमितोहि लीढ़॥ (र.र.स. 3/27)

Anupana– Triphala, Ghruta, Bhrunjaraja Swarasa, Madhu.

Pathyapathya–

क्षाराम्लतैलसौवीरविदाहिद्विदलं तथा।
शुद्धगन्धकसेवायां त्याज्यं योगयुक्तेन हि॥
(र.र.स. 3/36)

Apathya- Kshara, Amla, Taila, Sauvira, Vidahi, Dvidaka Anna.

Sevenkala–Morning and Evening

Kala maryada– (R.T. 8/46 and 8/57)

In condition of Kaphaja Roga, Shuddha Guggulu along with Shuddha Gandhaka and Triphala Churna with Ushna Jala for two months. In attain physical strength and Virya Vruddhi Suddha Gandhaka and Musali Churna along with milk for a period of one month.

Ashuddha Gandhaka Sevanajanya Vyadhi

अशुद्धगन्धः कुरुते च कुष्ठं तापं भ्रमं पित्तरूजं तथैव।
रूपं सुखं वीर्यं बलं निहन्ति तस्माद्विशुद्धो विनियोजनीयः॥
(आ.प्र. 2/18)

Ashuddha Gandhaka causes Kustha, Jwara, Bhrama, Pitta Vikara, Sukha, Virya and Bala Nasha.

Shanti Upaya

विकारो यदि जायेत गन्धकाच्चेत्तदा पिबेत्।
गोघृतेनान्वितं क्षीरं सुखी स्यात् स च मानुष॥
(वृ.र.रा.सु. गन्धक पेज 57)

Go Ghruta along Go Dugdha reduce the complication of Ashuddha Gandhaka.

Research updates

- Organic sulphur compounds are metabolized by the molybdenum dependent mitochondrial enzyme sulfite oxidase. This is also the process that detoxifies sulfite food additives.

Hendlers S, Rarvik D, eds. PDR for nutritional Supplements. 1st ed. Montvale, NJ : Medical Economics Co; 2001:308-309.

- The biosynthesis of organic sulphur compounds from sulphate takes place mainly in plants and bacteria, whereas the oxidation of these compounds to sulphate is characteristic of animal species. Suphur is excreted as sulphate, the urinary excretion of sulphate generally reflecting input from either inorganic or amino acid sources.

  Zlotkin SH, Anderson GH. Sulphur balances in intravenously fed infants : effect of cysteine supplementation. Am J Clin Nutr 1982;36:862-867.

- **Clinical evidences-** Study on chronic toxicity of Gandhaka Rasayan shows that it do not have any toxicity potential at the dose used in therapeutics and it is safe.

  Mundugaru R, Ballal SR, Bhat S, Basavaiah R. Chronic toxicity studies of Gandhaka rasayana-A herbo-mineral preparation used in Ayurvedic practice. J Ayurveda Integr Med. 2021 Oct-Dec;12(4):673-681.

- Study in the management of Dadru with local appication of Karpoor mixed with Nimba Taila and orally Gandhaka Rasayana shows significant efficacy. Prajapati, Vishal. (2024). Role of Gandhala Rasayana along with Karpoora mixed Nimba Taila in the treatment of Dadru-Case Report. Int. J. Ayu. Med. 13(2).550-553.

Shuddha Gairika

Chemical composition : XRD studies show that Shuddha Gairika contains ferric oxide, aluminium silicate hydroxide and A14 (OH)8 Si4O10) with triclinic lattice. The percentage of hematite, Kaolinite [$Al_2Si_2O_5(OH)_4$] and quartz are reported as 30.87%, 7.00% and 55.87% respectively in Gairika (Red ochre).

Probable mode of action- Kaolinite, by adhering to gastric and intestinal mucous membrane, diminishes irritation and gastric secretions and take up gases, toxins, bacteria and even viruses. It acts as gastro intestinal protector and anti-diarrheal, and topically as anti-inflammatory.

References-

1. Charade V. Kumar V. Dane G, Gandhi Y, Soni H, Jagtap C, Mishra SK, Shakya SK, Singh A, Singh R, Sharma BS, Khanduri S, Srikanth N, Acharya R and Webster TJ (2023). Establishment of the mechanism of purification and levigation of green chemistry-assistd biocomposites of red ochre (Gairika) : synthesis, characterization and antibacterial, prebiotic, antiooxidant and antacid activites of the traditional Ayurvedic medicine Laghu Suta Shekhar Rasa. Front Chem. 11:1271157.
2. Chavan SB, Gupta VS, Deshmukh VV, Sardesh mukh. Pharmaceutical standardization and physico-chemical characterization of traditional ayurvedic mineral drug red ochre roasted in cow's ghee (Shuddha Gairik). Indian J Tradit know : 21(2), April 2022. pp 303-316.

Pharmacodynamics and Pharmacokinetics– (R.R.S. 22/116)

Rasa - Madhura and Kashaya

Guna - Snigdha

Virya - Shita

- Red ochre (Mixture of ferric oxide and silicate of alumina) is being Shodhita by frying it into Ghrita. Study show that iron uptake and haemoglobin regeneration were high when it is consumed with saturated fat. Long chain fatty acids further increase ferrous iron uptake by intestinal brush border membrane. Other study also reveals that short-chain fatty acids like butyrate and propionate were found to enhance iron absorption in proximal colon, irrespective of the valency of iron.

  Chavan SB, Gupta VS, Deshmukh VV, Sardesh mukh. Pharmaceutical standardization and physico-chemical characterization of traditional ayurvedic mineral drug red ochre roasted in cow's ghee (Shuddha Gairik). Indian J Tradit know : 21(2), April 2022. pp 303-316.

चिकित्सकीय गुण (Therapeutic properties)

रक्तपित्तप्रशमनं तथा सृग्दरनाशनम्।
विषापहं तथा बल्यं मतं लोचनर्योहितम्॥
उदर्दकण्डूशमनं तथैव व्रणरोपणम्।
ज्वघ्नं च विशेषेण वह्निदाहनिवर्हणम्॥
(र.त. 22/117-118)

Gairika is useful in Raktapitta, Raktapradara, Visha, Netra Roga, Udarda, Kandu, Vrana Ropana, Jwaraghna and Agni Dagdha Daha Nashaka.

Avasthanusara prayoga

1. Shuddha Gairika added with Haridra Churna, Amrabija Majja Churna, Vidanga Churna, Khadira Churna along with water applied daily in eaffteced part to cure Yoni Kandu. (R.T. 22/120)
2. In Netra Abhishayanda condition, Shuddha Gairika added with Saindhava Lavana, Yashtimadhu Churna and Haridra Churna administered along with suitable Anupana. (R.T. 22/121)
3. In Karna Mula Shotha condition, Shuddha Gairika added with Shunthi Churna, Aragawadha Churna, Khatika Churna and Katphala Churna along with required quantity of Kanji. (R.T. 22/122)
4. In Shitapitta Roga, two Ratti of Shuddha Gairika is administrated along with required quantity of Madhu. (R.T. 22/123)
5. In Raktapitta Roga, Shuddha Gairika with proper dosage added with Rakta Chandana Churna, Ushira Churna and Dhanyaka Churna administered along with suitable Anupana. (R.T. 22/124)

Dosage-

द्विगुञ्जतः समारभ्य चतुर्गुञ्जमितं परम्।
सुवर्णगैरिकं शुद्धं युञ्जीत भिषजां वरः॥
(र.त. 22/119)

Dosage- 2 Ratti-4 Ratti (250 mg- 500mgs)

Anupana–Madhu, Dhanyaka Kwatha

Pathyapathya– According to Roga Avastha

Research update

There are many more haematinic iron products on the market, but they are unable to address the nutritional iron deficiency of such a vast population for a variety of reasons, including high iron product costs, benefits exhibited only after prolonged administration (5 months), and medication side effects. Gairika is a natural hematite mineral that occurs in igneous and metamorphic rocks as an accessory mineral with other iron-titanium oxide minerals. There are very few studies to analyze the products of Shodhana of Gairika. In light of the aforementioned; attempt was made to evaluate the changes that occur following Gairika's Shodhana, purified in two different ways. Shodhana of Gairika was done in two methods (methods A and Method B). Method- A employed Shodhana with Godugdha while Method B involved Shodhana with Goghruta. Organoleptic, and physiochemical characters of Gairika before and after Shodhana procedures were studied. ICP-AES of three samples of Gairika was also studied. Gairika Shodhana is achievable with both Godugdha and Goghruta. ICP AES data indicates trace metal levels within permitted limits, indicating that the medication's toxicity is minimal.

Ref- Ranade M. An analytical study of Gairika by two different methods of Shodhana.

Shuddha Kankshi

Chemical composition–Potash alum [$K_2SO_4(Al_2SO_4)_3.24H_2O$)

Pharmacodynamics and Pharmacokinetics

कांक्षी कषाया कटुका च तिक्ता ख्याता तथोष्णा विषदोषहन्त्री। (र.त. 11/181)

Rasa- Kashaya, Katu and Tikta

Guna- Grahi, Lekhana, Snigdha

चिकित्सकीय गुण (Therapeutic properties)

वीसर्पकण्डूतिहरा च केश्या श्वित्रापहा वै व्रणरोपणा च।
नेत्ररोगप्रशमनी विषमज्वरनाशिनी।
रतिमन्दिरसङ्कोचकारिणी व्रणहारिणी॥

ग्राहिणी लेखनी स्निग्धा रुधिरस्त्रावरोधिनी।
मुखरोगहरा चैव दन्तदाढयकरी मता॥
(र.त. 11/182-183)

Kankshi is useful in Visarpa, Kandu, Keshya, Shwitra, Vrana Ropana, Netra Roga, Vishama Jwara, restoring the laxity of female genital organ and can heal the local wounds, Grahi, Lekhana and Snigdha properties, it prevents the excessive bleeding, Mukha Roga and strengthens the gums and enamels.

Avasthanusara prayoga

1. Shuddha Sphatika added with equal quantity of Shuddha Mruddharasringa Churna and applied daily over wounds to heal. (R.T. 11/184)
2. Two Masha (2 gms) of Shuddha Sphatika is diluted with two Pala of water and used as Vaginal douche. It retains the Vaginal laxity. (R.T. 11/185)
3. To prevent the Nasal bleeding, use of Shuddha Sphatika is added with milk and administered as Nasya daily. (R.T. 11/184)
4. Shuddha Sphatika and Shuddha Tankana are diluted in water. The mixture is daily used for washing the skin affected by Vicharchika. (R.T.11/185)
5. Shuddha Sphatika and Lavanga Churna, Ela and Sugar in equal quantities used for Danta Dhavana in Danta Sharkara Roga. (R.T. 11/206)

Dosage– 1 Ratti-2 Ratti (125 mg- 250mgs)

Anupana– Madhu

Pathyapathya– According to Roga Avastha

Sevenkala– Twice daily.

Research update and Clinical evidence

Clinical study done by Rafieian N et al the treatment of recurrent aphthous stomatitis using mucosal adhesive patches containing alum and the basic pathces. Study design was randomized double blind placebo controlled and was conducted on 50 females of age group between 21 to 27 years. Result shown that average period of full recovery was 7.52 days in comparison to control group which was 12.2 days. The data obtained was statistically significant in comparison to control group.

Rafieian N, Abdolsamadi H. Moghadamnia A et al. Efficacy of alum for treatment of recurrent aphthous stomatitis. Caspian J Intern Med 2016; 7(3):201-205.

Mukta Pishti and Bhasma

Chemical composition– Study shows that raw Mukta is Calcium carbonate in aragonite form while Mukta Bhasma is Calcium carbonate in calcite form. EDAX Study shows that the percentage of Calcium was 37.51% in purified Mukta whereas in the Bhasma it was 46.32%. From this study it is assumed that Mukta Pishti, which is prepared by giving Bhavana to the Shodhita Mukta may contain Calcium similar to Shodhita Mukta which is having low percent of Calcium in comparison to Mukta Bhasma. Both of these may have different form of Calcium Carbonate.

Joshi N. Sharma K. Peter H, Dash MK. Standardization and quality control parameters for Mukta Bhasma (Calcinated pearl). Anc Sci life 2015 Jul-Sep; 35(1):42-51.

Pharmacodynamics and Pharmacokinetics

मौक्तिकं वृष्यमायुष्यं मधुरं शिशिरं परम्।
(र.त. 23/72)

Rasa - Madhura

Virya - Shita

Absorption of calcium– Calcium carbonate and calcium citrate are the two most common farms of calcium in supplements. Peoples having low levels of stomach acid, solubility rate of CaCO3 is lower leading the reduction of absorption unless they are taken with meal. Calcium citrate is less dependent on stomach acid so it can be taken without food. In general absorption of calcium supplements is greater when they are taken with food. Calcium absorption also depend upon source of calcium (Source - NIH).

Pharmacokinetics– Study done on Calcium bio-availability of nanonized and micronized pearl powder (Prepared by dry grinder) shows that nanonized pearl powder have better absorption and retention of calcium. It is also concluded that pearl powder is a beneficial source of Calcium. Chen HS. Chang JH, Wu JS. Calcium bioavailability of nanonized pearl powder for adults. J Food Sci. 2008 Nov; 73(9):H246-51.

चिकित्सकीय गुण (Therapeutic properties)

जीर्णज्वर प्रशमनं त्वस्थिदन्तविवर्द्धनम्।
हृद्यं मेहहरं मेध्यं दन्तोद्भेदज्वरापहम्॥
(र.त. 23/73)

Mukta Bhasma improves the Dipana Karma, Dahashamana, Netya, Varya. Mukta is useful in Jirna Jwara, Asti Danta Poshaka, Hrudya, Pramehahara, Medhya, Danta Udbhava Jwara Nashaka. Even in Kshaya Roga, Shwasa, Kasa, Visha it can be used.

Avasthanusara prayoga

1. रससिन्दूर संयुक्तं मौक्तिकं परिशीलितम्।
विनिहन्त्यचिरादेव दन्तोद्भेदभवं ज्वरम्॥
(र.त. 23/76)

   Mukta Bhasma along with Rasa Sindura used to cure Jwara during Danta Udbhava.
2. Mukta Bhasma, Pravala Bhasma, Shuddha Parada and Shuddha Gandhaka mixed along with Beejapura and subjected Laghu Puta. When cool on its own, the medicine is collected and used for one month in Rajayakshma Roga. (R.T. 23/77)
3. In Kshaya Roga, Mukta Bhasma and Pravala Bhasma administred daily along with suitable Anupana. (R.T. 23/78)
4. In Hikka Roga, Mukta Bhasma added with Katuki Churna, Swarna Gairika Churna administered daily along with suitable Anupana. (R.T. 23/79)
5. In Hikka Roga, Mukta Bhasma added with Swarna Bhasma, Tamra Bahsma and Kanta loha Bahsma administered daily along with Nimbu Swarasa. (R.T. 23/80-81)

Dosage-

आरभ्य गुञ्जापादांशाद् गुञ्जैकप्रमितं मृतम्।
मौक्तिकं विनियुञ्जीत बलकालाद्यपेक्षया॥
(र.त. 23/75)

1/4 Ratti-1 Ratti (31mgs- 125 mgs)

Anupana– Madhu

Sevenkala– Twice daily.

Kala maryada–

मृतविद्रुमगन्धेशसंयुतं मृतमौक्तिकम्।
बीजपूराम्भसा पिष्टं पक्वं लघुपुटे ततः॥
भक्षितं सततञ्चैव गुञ्जाद्वितयसम्मितम्।
मासमात्रप्रयोगेण निहन्ति क्षयमुल्बणम्॥
(र.त. 23/77-78)

Mukta Bhasma, Pravala Bhasma, Shuddha Parada and Shuddha Gandhaka mixed along with Beejapura and subjected Laghu Puta. When cool on its own, the medicine is collected and used for one month in Rajayakshma Roga.

Research update and Clinical evidence

- Study done by Nanda Ruchika et.al using Rakta-Chap Har Yoga (Combination of Sarpgandha, Shankhapushpi, Jatamansi, Jahar Mohra Khatai Pisthi, Moti Pishti and Rasa Sindoora) in the patients of essential hypertention. 98 patients between the age group 28-76 years having essential hypertention without any co-morbid illness were treated with 500 mg twice of this Yoga for eight weeks. After 8 weeks of therapy significant fall in the SBP, DPB and MBP was observed. Nandha Ruchika, Singh Harpal, Mondgill, Parminder, Kular, Gurpreet, Ayu 32 (3): p 329-332 Jul-Sep 2011.
- A pilot study to clinically evaluate the role of Herbo mineral compound "Rakta chap Har" in the management of essential hypertension.

Pravala Pishti & Bhasma

Chemical composition– XRD Study shows that Pravala having $CaCO_3$ Pravala Bhasma

having CaO. Mishra A, Mishra AK, Tiwari OP, Jha S. In house preparation and characterization of an Ayurvedic Bhasma; Praval Bhasma. J Integr Med. 2014 Jan; 12 (1):52-8.

Pharmacodynamics and Pharmacokinetics

विद्रुमं सुमृतं क्षारं मधुरं लघु शीतलम्।
त्रिदोषशमनं बल्यं विशेषात्कफवातनुत्॥
(र.त. 23/139-140)

Rasa- Kshara and Madhura

Guna- Laghu and Shita

Doshaghnata- Tridosha Shamaka

चिकित्सकीय गुण (Therapeutic properties)

दीपनं पाचनं चैव दृष्टिरोगनिषूदनम्॥
त्रिदोषशमनं बल्य विशेषात्कफवातनुत्।
क्षय कासहरं चैव रक्तपित्तप्रणाशनम्॥
स्वेदातिनिर्गमहरं रात्रिस्वेदहरं परम्।
विषघ्नं भूतशमनं वीर्यवर्णविवर्धनम्॥
(र.त. 23/139-141)

Pravala Bhasma is Dipanaiya, Pachana properties it is useful in all types of Netra Roga, Tridosha Shamaka, Balya, Kshayahara, Kasahara, Raktapitta Nashaka, Atisweda and Ratri Sweda Nashaka, Visha Nashaka, Bhuta Shamaka, Virya and Varna Vardhaka.

Avasthanusara prayoga

1. In Kaphaja Mutrakrucchaa, two Ratti pf Pravala Bhasma is administered daily along with Tandulodaka.(R.T. 23/143)
2. One Ratti Pravala Bhasma is added with Rasasindura along with four Ratti of Katuki Churna, 8-10 Draksha, one Masha Haritaki Churna to prepare pills administered daily along with warm water or milk to cure Vidvighata (constipation). (R.T. 23/144)
3. In Mutrasada Roga, one Ratti of Pravala Bhasma added with Rasasindura administered daily along with Gokshura Kwatha. (R.T. 23/145)
4. In Shotha Roga, Pravala Bhasma added with Rasasindura administered daily along with Punarnava or Gokshura Kwatha. (R.T. 23/147)
5. In Mutrakruccha Roga, Pravala Bhasma administered daily along with Shatavari or Gokshura Kwatha. (R.T. 23/148)

Dosage -

गुञ्जार्धतः समारभ्य गुञ्जाद्वयमितं परम्।
विद्रुमं विनियुञ्जीत बलकालाद्ययेक्षया॥
(र.त. 23/142)

1/4 Ratti-2 Ratti (31 mgs- 250 mgs)

Anupana– Madhu

Sevenkala– Twice daily.

Kala Maryada–

समयशदसमेतं मारितं भौमरत्नं विमलमधुविमिश्र शीलितं तु त्रिमासम्। करयुगलसमुत्थां स्वेदसंस्त्रावबाधामपहरति नितान्तं वै बहूत्थानजाताम्॥ (र.त. 23/149)

To cure excessive Sweda from palm and sole or from any part of body, use of Pravala Bhasma added with Yashada Bhasma administered daily for three months along with Madhu.

Research update and Clinical evidence

- Animal study to see the effect of Praval Bhasma on bone mineralization shows that it is effective in the prevention of Calcium and estrogen deficient bone loss. Prabhakara N Reddy. M Lakshmana. U Venkatesh Udapa. Effect of Praval Bhasma (Coral calyx), a natural source of rich calcium on bone mineralization in rats. Pharmacological Research 48 (2003)593-599.
- Clinical study done on Praval Shakha Bhasma and Praval Mula Bhasma shows that both are helpful in treatment of Amalpitta. Dose of drug given was 500 mg capsule thrice daily with water for a period of 21 days.
  Himanshu S Tiwari, B Patgiri PK prajapati. A comparative study on Praval Mula Bhasma and Praval Shankha Bhasma in Amalpitta. JRAS Vol. XXIX (3) July-Sept 08 pp 123-128.

Vajra Bhasma

Chemical composition– Hiraka Bhasma composition C and O along with this Si, Na, Mg, P, K and Fe.

Pharmacodynamics– (R.T. 23/25)

Rasa- Shad Rasa

Doshaghnata- Tridosha Shamaka

Guna- Yogavahi and Rasayana

चिकित्सकीय गुण (Therapeutic properties)

राजयक्ष्म प्रशमनं मेहमेदोविनाशनम्।
पाण्डुशोथोदरहरं तथा क्लैव्यहरं परम्॥
वृष्यं महायुष्यमतीव नेत्र्यं बल्यं त्रिदोषघ्नतीव वर्ण्यम्।
मेध्यं विशेषाद्विविधामयघ्नं सुधोपमं स्यात्सुमृतं तु हीरम्॥

(र.त. 23/26-27)

Hiraka Bhasma is sueful in Rajayakshma, Prameha, Medoroga, Pandu, Shotha, Kaiblya Nashaka, Vrushya, Ayuvardhaka, Netra, Bala Vardhaka.

Avasthanusara prayoga

1. In Dhwajabhanga (impotency), Vajra Bhasma is added with Rasasindura equal quantity adminsitred daily along with Navanita (butter).(R.T. 23/31)
2. In Rajayakshama Roga, Vajra Bhasma is added with equal quantity of Swarna Bhasma and Rasasindura administered daily along with suitable Anupana. (R.T. 23/32)

Dosage-

रक्तिकाया नेत्रगुणभागतस्तु कलांशकम्।
मृत हीरं प्रयुञ्जीत बलकालाद्यपेक्षया॥

(र.त. 23/28)

Dosage- 1/32 – 1/6 Ratti (3.9 mgs-7.8 mgs)

Anupana– Dugdha, Kshudra, Ghruta

Pathyapathya– According to Roga Avastha

Sevenkala– Morning

Ashuddha Asamyak Marit Bajra Dosh

अशुद्धं कुरुते वज्रं कुष्ठं पार्श्वव्यथां तथा।
पाण्डुतापगुरुत्वं च तस्मात् संशोध्य मारयेत्॥

(र.ज.नि. 3 खण्ड 4 अध्याय)

Ashuddha Hiraka Bhasma causes Kusta, Parshwapida, Tapa, Guruta.

Shanti Upaya

सितामधुघृतैः सार्द्धं गोदुग्धं दिन सप्तकम्।
विधिना सेवितं हन्ति वज्रदोष चिरोत्थितम्॥

(र.ज.नि. 3 खण्ड 4 अध्याय)

Godugdha along Sita, Madhu, Ghruta for seven days to reduce the Ashuddha Hiraka Bhasma Janya Dosha.

Research update and Clinical evidence

- Study done by Paladhi A. et al shows that Styu-ND (Vajra Bhasma) possess immuno-stimulatory and tumoricidal properties againt highly metastatic and aggressive murine lymphoma. Ayu-ND (Vajra Bhasma) also has unique capacity to activate dendritic cells suggesting its potential to intiate strong. Long lasting adaptive killer cell immunity with a distinct memory phenotype.
- Study done by Rathi R et al in acute lymphoblastic leukemia using Ayurvedic formulation (Combination of Heeraka Bhasma), Suvarna Bhasma, Abhraka Bhasma Sahaastraputi, Lauha Bhasma and Tamra Bhasma) which was administered in a dose of 8 mgs. i.d with 15 ml of juices of Shyama Tulsi, Bilva leaf and Sadaphuli and each 5 ml of Rohitakarishta, Kumari Asava and Lohasava after 1 hour of meal. Along with these Majja Basti was also given. Study indicates that these medicines were effective in the treatment of All (Advance stage of L1). Ref- Rathi Renu, Rathi Bharat A case Report of Acute Lymphoblastic Leukemia-An Ayurvedic Approach. Ayurpharm Int. J. Ayur Alli Sci. 2014;3(2):48-51.

Kaparda/Varatka Bhasma

Chemical composition– Varatika Bhasma contains calcium (19-.32%), Magnesium (8.43%). Along with these it also contains K, S, N, P and organic Carbon.

Pharmacodynamics and Pharmacokinetics

वराटी दीपनी चोष्णा नयनातङ्कहारिणी।
(र.त. 12/95-96)

Varatika Bhasma is Dipana and Ushna Guna Yukta and also used in Agnimandya and Grahani Roga.

चिकित्सकीय गुण (Therapeutic properties)

कर्णस्त्रावहरात्यर्थं वह्निमाद्यविनाशनी ॥
पक्तिशूलादिशमनी ग्रहणी गजसिंहिका।
क्षयस्फोटापहा वृष्या मात्रा रक्तिद्वयोन्मिता ॥
(र.त. 12/95-96)

Varatika Bhasma is useful in Netra Roga, Karnastravahara, Agnimandya, Parinama Shula, Kshaya Nashaka and Vrushya.

Avasthanusara prayoga

1. In Puyastrava condition, Karpada Bhasma added with Samudra Phena mixture is filled in Karna Nadi.(R.T. 12/97)
2. In Agnimandya condition, Karpada Bhasma administered daily along with Trikatu Churna in equal quantity. (R.T. 12/98)
3. In Kasa Roga, Karpada Bhasma is administered daily in suitable Anupana along with Nimbukamla and Trikatu Churna. (R.T. 12/99)
4. In Grahani Roga, Karpada Bhasma is administered daily in suitable Anupana along with Mruddarasringa Churna. (R.T. 12/101)
5. In Grahani Roga, Karpada Bhasma is administered daily in suitable Anupana along with Rasasindura and Udumbara Swarasa. (R.T. 12/102)

Dosage– 2 Ratti (250mgs)

Anupana- Nimbu Swara, Ghruta and Madhu

Pathyapathya– According to Roga condition.

Sevenkala– Twice daily

Kala maryada–

शङ्खत्र्यूषणसंयुक्ता मृता खलु वराटिका।
दिनसप्तकमात्रेण ग्रहणी नाशयेद् ध्रुवम् ॥
(र.त. 12/101)

Varatika Bhasma, Shankha Bhasma and Trikatu Churna is used for seven days in Grahani Roga.

Research update and Clinical evidence

- Varatika Bhasma Contains Calcium 54.984% as CaO and its pH is 10.44.
- Clinical study done on Kaparda Bhasma by Rohit Kumar Ravte et al. in the patients of Amlapitta where total ten patients were trial in this study. Kaparda Bhasma was administered 250 mg twice a day for 21 days using water as Anupana. The result was significant on both subjective and objective parameters when compared with their baseline value of this study.

  Damodar VD, Das AK. A comparative pharmaceutical and Analytical study of Shankha, Shukti and Varatika Bhasma. PIJAR; 1(1) Aug-Sep 2016.17-20.

  Ravte Rohit Kumar, Dixit Amit Kumar, Mitra Achintya, Hazra Jayram, Sharma Loknath. Efficacy of Kaparda BHASMA. A popular Ayurvedic drug in the management of Amlapitta (Acid peptic syndrome); EJPMR, 2015;2(5),394-401.

Shankha Bhasma

Chemical composition– Calcium carbonate (Calcite form) and Ca as 39.02% w.w)

Pharmacodynamics and Pharmacokinetics

शङ्खःसुशीतलः क्षारस्त्वलपित्तविनाशनः।
(र.त. 12/20)

Shankha Bhasma will have Shitala and Kshariya properties. It cures the Amlapitta, Agnimandya and provides the strength.

चिकित्सकीय गुण (Therapeutic properties)

अग्निमांद्यहरो बल्यो ग्राही ग्रहणिकाहरः ॥
परिणामशूलोत्थशूलघ्नस्तारुण्यपिडिकावहः ।
विषदोषहरो वर्ण्योमात्रा हिगुञ्जोन्मिता ॥
(र.त. 12/20-21)

Shankha Bhasma is useful in Amlapitta

Nashaka, Agnimandya, Balya, Grahanihara, Parinamashula, Tarunya Pidika, Visha Dosha Nashaka and Varnya.

Avasthanusara prayoga

1. In Grahani and Atisara Roga, Shankha Bhasma is administered daily along with Nimbu Swarasa. (R.T. 12/22)
2. In Agnimandya Roga, Shankha Bhasma is administered daily along with Trikatu Churna. (R.T. 12/23)
3. In Amlapitta Roga, Shankha Bhasma is administered daily along with Amalaki Churna. (R.T. 12/24)
4. In Gulma Roga, Shankha Bhasma is administered daily along with Trikatu Churna and Yava Kshara. (R.T. 12/25)
5. In Sannipatika Shula Roga, Shankha Bhasma is administered daily along with Trikatu Churna, Saindhava Lavana and Shuddha Hingu. (R.T. 12/26)
6. In Parinama Shula Roga, Shankha Bhasma is administered daily along with Lavana Panchaka, Guda and Trikatu Churna. (R.T. 12/27)
7. In Shwasa Roga, Shankha Bhasma is administered daily along with Bharangi Churna. (R.T. 12/28)
8. In Jatharagni Dipana, Shankha Bhasma is administered daily along with Shunthi Churna. (R.T. 12/29)
9. In Atisara Roga, Shankha Bhasma is administered daily along with Musta, Jatiphala, Ahiphena and Tankana in one Ratti. (R.T. 12/30)
10. In Chardi Roga, Shankha Bhasma is administered daily along with Haridra and Puga Churna. (R.T. 12/31)

Dosage– 2 Ratti (250mg)

Anupan– Nimbu Swarasa, Trikatu etc.

Pathyapathya– According to Roga Avastha

Sevenkal– Twice daily

Kala maryada–(R.T. 12/30-34)

Shanka Bhasma 2 parts, Karpada Bhasma one part, Kajjali 1 part, Pippali Churna four part mixed with Nimbu Swarasa. Prepare the Vati, used with Ghruta for 15 days daily twice day help in Grahani Roga.

Research update and Clinical evidence

- Shankha Bhasma was prepared by taking Shankha, Shodhita with Nimbu Swarasa and Shodhita with Kanji as liquid media. In both of the media Swedana procedure was followed. After Shodhana in both method Shankha were subjected to Puta and Bhasma was made. After that Both of the Bhasma were clinically trialed in Gastroesophagel reflux disease. Total 80 patients were included in this study. It was found that Shankha Bhasma prepared with lemon juice Shodhita Shankha has statistically significant clinical benefit in comparison to sour gruel Shodhita Shankha. In this study the dose was given as 300 mg along with goose berry twice daily. Ranade M, Chary DL. Comparison of two purification products of Shankha Bhasma: A prospective randomized control trial. J Nat Sc Biol Med 2013; 4:160-2.
- Animal trial done to study the anti-ulcer effect of Shankha Bhasma in albino rats shows that it has dose dependent reduction of ulcer index in indomethacin treated rats as well as in rats subjected to cold restraint stress when compared to control. Pandit S, Sur TK. Jana U, Bhattacharya D. Debnath PK. Antiulcer effect of Shankha Bhasma in Rats: A preliminary study. India Journal of Pharmacology 2000; 32:378-380.

Godanti Bhasma

Chemical composition– Godanti Bhasma is anhydrous calcium sulphate.

Das SK. Joshi A, Bisht L, Das N, Balkrishna A. Dhara S. Godanti Bhasma an hydrous $CaSO_4$ induces massive cytoplasmic vacuolation and cell survival response through stimulation of LC3. Associated Phagocytosis (LAP). Bio Rxiv Feb

2021. doi:https://doi.org/10.1101/2020.02.01.990594.

Pharmacodynamics and Pharmacokinetics- (R.T. 11/241)

Godanti Bhasma has Shita Guna and Dipana Guna. It is used in Jirna Jwara Nashaka.

- Godanti Bhasma may inhibit the synthesis of prostaglandin and other mediator as it has antipyretic activity. It may act as gastric cytoprotective agent by modulating scavenging of free radicals.
- Dubey N. Dubey N, Mehta RS, Sharma P, Ghule S. Mithun. Toxicological and Pharmacological Assessment of Godanti Bhasma. Asian Journal of Chemistry; 24(10).2012;4653-4656.

चिकित्सकीय गुण (Therapeutic properties)

गोदन्तं सुमृतं शीतं पित्तज्वर निषूदनम्।
जीर्णज्वरहरं बल्यं दीपनं श्वासकासनुत्॥
(र.त. 11/241)

Godanti Bhasma is useful in Pitta Jwara, Jirna Jwara, Balya, Dipana and Shwasa Kasahara.

Dosage-

गुञ्जैकतः समारभ्य गुञ्जात्रयमितं परम्।
गोदन्तं विनियुञ्जीत बलकालाद्यपेक्ष्या॥
(र.त. 11/242)

Dosage-1-3 Ratti (125- 375 mgs)

Anupana– Madhu

Pathyapathya– According disease condition

Sevenkala– Twice daily

Research update and Clinical evidence

- Acute toxicity studies done in nice show that Godanti Bhasma in safe upto a maximum dose of 2000 mg/kg body weight and no mortality was seen after 14 days of oral administration.
- Godanti Bhasma 500 mg along with Shirsooladi Vajra Rasa 500 mg and Pathyadi Kwatha 20 ml twice were administered for the treatment of Migraine. The drugs were given for four week. Visual analogue scale (VAS) score and clinical symptoms were significantly improved from baseline to the end of treatment.

  Mangal A. Pali S. & Makhija P. (2021, March 27). Efficacy of and Ayurvedic Intervention in the management of Migraine: A case report. International Journal of AYUSH case reports, 5(1),19-23.

Shuddha Tankana

Chemical composition– $Na_2B_4O_7.5H_2O$ having orthorhombic structure. Purified Tamkana is having 13.48%. Boran as B.

Srinivashulu B, Bhadra DP, Murthy PHC. Physico chemical standardization of Tankana (Borax) : An Ayurvedic Mineral Drug. The pharma Journal; 1 (6):2012; 18-25.

Pharmacodynamics and Pharmacokinetics

टङ्कणः कटुरुष्णश्च रूक्षस्तीक्ष्णश्च सारकः।
(र.त. 13/79)

Shuddha Tankana Katu Rasa, Tikshna, Ruksha and Sara Guna.

चिकित्सकीय गुण (Therapeutic properties)

कफ विश्लेषणो हृद्यो वातामयनिबूदनः।
कासश्वासहरः कामं स्थावरादिविषापहः।
अग्निदीप्ति कटश्चापि भृशमाध्माननाशनः॥
स्त्री पुष्पजननो बल्यो विवध व्रणनाशनः।
पित्तकृच्च समाख्यातो मूढागर्भप्रवर्तक॥
(र.त. 13/79-81)

Shuddha Tankana is useful in Kapha Nisaraka, Hrudaya Vata Roga Nashaka, Kasa Shwasahara, Sthavara Visha Nashaka, Agni Dipaka, Adhmanahara, Stripushpajanana, Balya, Vrana Nashaka and in condition of Mudhagarbha Pravartaka.

Avasthanusara prayoga

1. In Excess Kapha Dosha, Shuddha Tankana is administered daily in suitable dosage along with Kataphala Churna, Trikatu Churna, Vasa

Kshara and Yava Kshara. (R.T.13/82)

2. In Udara Roga, Tankana Bhasma is added with equal qunatities of Trikatu Churna and Jayaphala Churna mix with water to roll the pills. The pills are dried in shape and stored in containers. (R.T. 13/83)
3. The fine powder of Shuddha Tankana is used as dusting powder on wounds. (R.T. 13/89)
4. The fine powder of Shuddha Tankana is added with Madhu and applied in Mukhapaka. (R.T.13/91)
5. In Yonipaka Roga, the part is washed with Shuddha Tankana Jala or same liquid is used for Uttara Basti. (R.T.13/92)
6. In severe Chardi Roga, Shuddha Tankana is administered daily in suitable dosage along with Kakamachi Swarasa. (R.T.13/93)

Dosage– 125 mg

Anupana– Madhu, Trikatu Churna

Pathyapathya– According disease condition

Sevenkala– Twice daily

Ashuddha Apakwa, Avidhi Sevanajanya Vyadhi

अशुद्धष्टङ्कणो वान्ति भ्रान्तिकारी प्रयोजितः।
अतस्तं शोधयेदेव.....॥
(आ.प्र. 2/244)

Ashuddha Tankana causes Vamana and Bhrama.

Research update and Clinical evidence

- Tankan Churna has significant membrane stabilizing activity of 72.22% and protein inhibition activity of 94.65% at concentration of 200 mg/ml when compared with standard diclofenac sodium. Showing its anti-inflammatory activity. Ref- Kumar BSA. Saram GS. Mouna A. Kumar CN. In Vitro Anti-Inflammatory Activity of Tankana churna. Food and Feed Research 40 (1), 17-20, 2013.
- Study done for the treatment of Tonsilitis where Tankana Bhasma was used in the Kavala form. Study was done in 40 patients doing Kaval for 2 minutes twice a day after food for 15 days. After study marked relief in the symptoms of tonsilitis was seen. Ref- Sadhana parajuli, Amulya Dahal, Pramod Bhatt. Effectiveness of Tankana Bhasma kavala in Tonsilitis. J. Ayurveda Integrmed Sci. 2021; 1:80-83.
- Tankana Bhasma Pratisarana with Madhu in the management of Tundekai shows that it has significant effect. This study was done 15 patients on alternate days for 13 days. It was also compared with Sphatika Bhasma and Madhu pratisarana in the Tundikari. The efficacy of Tankana Bhasma pratisarana was more significant in comparison to sphatika Bhasma pratisarana. Ref- Sahoo I, Moress, Jadav V, Dalai S, Sahoom. Clinical Appraisal on therapeutic efficacy of Tankana and Sphatika Bhasma with Madhu Pratisarana in Tundikeri, Journal of Drug Delivery and Therapeutic. 2019; 9(6):130-134.

4 CHAPT.

Aushadhi Kalpa-I (Compound Formulations)

Syllabus

Kharaliya Rasayana -

- Arogyavardhini Gutika : A.F.I. - I, Rasayoga, 20:4, R.R.S. Visarpa Chi. 20/106
- Kumara Kalyana Rasa: A.F.I. - I, Rasayoga, 20:9, B.R. Balaroga / 163
- Garbhapala Rasa: A.F.I. - II, Rasayoga, 16:14,R.T.Sa. Part - I, 140
- Chandraprabha Vati : A.F.I. - I, Vati Gutika, 12:10,Sha.Sa.M.7/40
- Pravala Panchamrita Rasa : A.F.I. - II, Rasayoga, 16:37,B.R. Gulma / 139
- Anandbhairava Rasa : A.F.I. - I, Rasayoga, 20:3,R.Sa.Sa.Jwara 2/103
- Yogendra Rasa : A.F.I. - I, Rasayoga, 20:31,B.R. Vatavyadhi / 506
- Laxmivilas Rasa : A.F.I. - I, Rasayoga, 20:39, B.R. Rasayana / 55
- Vasantakusumakara Rasa : A.F.I. - I, Rasayoga,20:42,R.Sa.Sa.Rasayana Vajikarana / 80
- Vasantamalti Rasa : A.F.I. - I, Rasayoga, 20:41, Si.Bhai.Ma.Ma.Jwara / 60
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- Shankha Vati : A.F.I. - I,Vati Gutika, 12:32,B.R. Agnimandya / 182
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- Ichchhabhedi Rasa : A.F.I. - I, Rasayoga, 20:5,B.Ra. Udararoga / 84
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Parpati Rasayana

- Panchamruta Parpati : A.F.I. - I, Parpati, 16:1, B.R.Grahani / 461
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Kupipakwa Rasayana

- Swarna Vanga : A.F.I. - I, Kupipakva, 15:9, Rasamruta 3/ 95
- Makaradhwaja : A.F.I. - I, Kupipakva, 15: 2, B. R. Vajikarana 2/ 237
- Sameerpannaga Rasa : A.F.I. - I, Kupipakva, 15:8, A.A.G.S. Part - 4 Page 88

Pottali Rasayana

- Hemagarbha Pottali : A.F.I. - II, Rasayoga, 16:66, Rasamruta Rasavigyaniya 9/218

Learning objectives

1. Describe reference, ingredients, therapeutic properties, dosage and all administration details along with Anupana of each formulation.
2. Explain Pathya Apathya, Sevana Avadhi (duration of treatment) and shelf-life of each formulation.
3. Interpret probable mode of action of each formulation as per Ayurveda.

4. Explain research updates and clinical evidences of Arogyavardhini Gutika and Gandhaka Rasayana.
5. Critically analyse compound drugs for their therapeutic actions mentioned in the classics.

Total lecture- 20, Lecture :16 hours, Non lecture: 4 hours

Marks- 5 marks, MCQ- Yes, SAQ (5 Marks)- Yes and LAQ (10 Marks)- No

Kharaliya Rasayana

Parad and Gandhaka and / or herbs or minerals/ metals ingredients are ground together in a mortar Khalva to produce a finely powdered drug. as per the terminology of Ayurveda, the formulation is known and classified as Kharaliya Rasayana.

Kharaliya Rasayana got importance the mercury and other ingredient of the formulation are grinded in mortar known as Khalva hence termed as Kharaliya Rasayana. The speciality of Kharaliya Rasayana lies in binding different varieties of drug in to single molecular form and minimizing dose and more effective in action. Khalvi Rasa Kajjali contains mercury & Sulphur / herbs / mineral / metal ingredients are ground together in a mortar to produce a finely powdered drug. Rubbing between surfaces of mortar and pestle i.e., surface phenomena, some heat is produced so, there may be possibility of occurrence of chemical reaction in between materials and media. New and desired qualities may be produced by such reaction. In the Rasashastra mentioned the procedures to Rasa Kalpas used Khalvi Rasayana in control the unsteadiness of mercury. Kajjali is key ingredient. Main role of Kajjali as a Rasayana drug. Kajjali is prepared from one part purified Parad and one part purified Gandhaka.

Procedure

1. Collection of raw material (Rasadravya, Vanoushadhi, Bhavana Dravya)
2. Kajjali Nirmana
3. Mixing of all ingredient
4. Bhavana
5. Ready to use in form of Vati, Guti, etc.

Khalva Yantra which includes both mortar & pestle, is used for triturating / pounding different types of herbal and mineral drugs. It is an instrument made up of good quality of stone in different shapes & size useful for trituration used for grinding, powdering & mixing medicine.

Importance

1. Prolonged shelf life of formulation
2. Increase therapeutic efficacy
3. Decrease dosage
4. Decrease duration of treatment

Kharliya Rasayana is the main foundation for most of the Rasaoushadis. Kajjali plays an important role in this, it has Ushna Guna and Katu Vipaka which acts as Yogavahi and Tridoshghana.

Necessary equipment-Khalva Yantra

Shelf life- 5 years

Arogyavardhini Gutika (A.F.I. - I, Rasayoga, 20:4, R.R.S. Visarpa Chikitsa. 20/106)

रसगन्ध लोहाभ्रशुल्व भस्म समांशकम्।
त्रिफला द्विगुणा प्रोक्ता त्रिगुणञ्च शिलाजतु॥
चतुर्गुणं पुरं शुद्धं चित्रमूलं च तत्समम्।
तिक्ता सर्वसमाज्ञेया सर्वं सञ्चूर्ण्य यत्नतः॥
निम्बवृक्ष दलाम्भोभिर्मर्दयेद्दिदिनावधि।
ततश्च वटिका कार्या राजकोलफलोपमा॥

(र.र.स. विसर्पादि चिकि. 20/106-108)

Ingredients

- Shuddha Parada - 1 part
- Shuddha Gandhaka - 1 part
- Loha Bhasma - 1 part
- Abhraka Bhasma - 1 part
- Tamra Bhasma - 1 part
- Haritaki - 2 part
- Bibhitaki - 2 part

- Amalaki - 2 part
- Shuddha Shilajatu - 3 part
- Shuddha Guggulu - 4 part
- Chitra Eranda - 4 part
- Tikta Katuki - 220 parts
- Nimba Swarasa- Quantity Sufficient.

Method of preparation

Fine power of above ingredient is ground with the neem juice extract, made into paste and pills are prepared.

Chemical/phytochemical composition

Kajjali is Hgs (Black Sulphide of Mercury), Loha Bhasma (Fe_3O_4), Abhraka Bhasma [Mg (Al Fe]$_2O_4$ and $KAlSiO_4$ (Si_2O_6), Tamra Bhasma (Cupic oxide), Shilajatu (Fulvic acid), Haritaki (Chebulinic acid tannic acid etc.), Bibhitaki (Fructose, Rhamnose), Amalaki (Vit C, phyllemblin, linolic acid), Guggulu (guggulusterols, E-guggulsterone), Kutaki (Kutkiol, Kutkisterol, apocyanin).

Pharmacodynamics and pharmacokinetics

क्र.सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	कज्जली	–	–	–	–
2.	लौहभस्म	तिक्त, कषाय	रूक्ष, गुरू	शीत	मधुर
3.	अभ्रकभस्म	मधुर	स्निग्ध	शीत	—
4.	ताम्रभस्म	तिक्त, कषाय, मधुर	स्निग्ध, लेखन	उष्ण	कटु
5.	आमलकी	पंचरस अम्ल प्रधान	गुरु, रूक्ष, शीत	शीत	मधुर
6.	विभीतकी	कषाय	रूक्ष, लघु	उष्ण	मधुर
7.	हरीतकी	पंचरस कषाय प्रधान	रूक्ष, लघु	उष्ण	मधुर
8.	शिलाजतु	तिक्त, कटु	–	उष्ण	कटु
9.	गुग्गुलु	तिक्त, कटु	रूक्ष, लघु	उष्ण	कटु
10.	चित्रकमूल	कटु	रूक्ष, लघु, तीक्ष्ण	शीत	कटु
11.	तिक्ता	तिक्त	रूक्ष, लघु	शीत	कटु
12.	निम्ब	तिक्त, कषाय	रूक्ष, लघु	शीत	कटु

चिकित्सकीय गुण (Therapeutic properties)

मण्डलं सेविता सैषा हन्ति कुष्ठान्यशेषतः ।
वातपित्तकफोद्भूताञ्ज्वरान्नानाप्रकारजान् ॥
देया पञ्चदिने जाते ज्वरे रोगे वटी शुभा ।
पाचनी दीपनी पथ्या ह्रह्या मेदोविनाशिनी ॥
मलशुद्धिकरी नित्यं दुर्धर्षक्षुत्प्रवर्तिनी ।
बहुनात्र किमुक्तेन सर्वरोगेषु शस्यते ॥
आरोग्यवर्धनी नाम्ना गुटिकेयं प्रकीर्तिता ।
सर्वरोगप्रशमनी श्रीनागार्जुनयोगिना ॥

(र.र.स. विसर्पादि चिकि. 20/109-112)

- Malashuddhikarari (Elimination of waste material from the body)
- Arogyavardhinivati helps in breaking hard stools and eliminates toxins from the body. Intestines gets cleaned & improves in functioning.
- It increases Kshudha (appetizer)
- Sarvarogprashamani (alleviate all types of disorders from body).
- Tridosha Jwara Nashaka (fever comprises of three Doshas)
- Arogyavardhini should be given for 5 days. This drug having properties of Pathya

(wholesome for channels), Pachani (digestive), Dipani (appetizer).

- Kushthaghna (Can alleviate all types of skin disorders) indicated for 1 Mandal (14 days). It proves to be very useful in Kushta specially in Vata and Vata kapha Pradhana Kushta.
- Hridya (cardioprotective)
- Medovinashini (reduce the obesity)

Matra - 250- 500mg

Anupana- Adraka Swarasa, Madhu, Nimbu swrasa, Jala, Dugdha.

Pathyapathya- depend of disease condition.

Sevana Kala- Twice daily

Kala Maryada- In Kustha Roga one Mandal (48 days)

Ashuddha Apakwa processed, Avidhi Sevanajanya Vyadhi and their Shantyupaya

Kajjali, Loha Bhasma, Tamra Bhasma, Abhraka Bhasma are used in preparation of Arogyavardhini Vati. If any of these not properly prepare, then consuming it will cause diseases caused by particular Bhasma. This diseases and Shanti Upaya have been described in Chapter third.

Research updates and clinical evidences for each of the following formulations

- Animal study done on Aarogyavardhini vati at a dose level of 50, 250 and 500 mg/kg body weight (1, 5 and 10 times of human equivalent dose respectively) for 28 days shows no significant change in behavioral parameters, acetyl-cholinesterase activity, liver and kidney function tests at all doses as compared to normal control. The drug was, administered orally. The finding of the study suggested that Aarogyavardhini vati in the doses equivalent upto 10 times of the human dose administered to rats for 28 days does not have appreciable toxicological effects on brain, liver and kidney.

  Reference - Kumar G. Srivastava A. Sharma SK, Gupta YK. Safety evaluation of an ayurvedic medicine, aarogyavardhini vati on brain, liver and kidney in rats; Journal of Ethnopharmacology; 2012;140 (1):151-160.
- Clinical study done on 87 patients to whom Arjun powder 5g BD for three weeks along with Aarogya Vardhini Vati 500 mg BD for four weeks was given orally. The safety assessment results showed no significant change in serum ALT, AST, ALP and bilirubin, urea, creatinine and NGAL levels at the end of study as compared to the baseline levels. The results of this prospective cohort clinical study showed that Ayurvedic treatment comprising of Arjuna powder & Aarogya Vardhini Vati is safe and effective for dyslipidemia.

  Reference -Kumar G. Srivastava A., Sharma SK., Gupta YK. Safety and efficacy evaluation of ayurvedic treatment (Arjuna powder and Arogya Vardhini Vati) in dyslipidemia patients; a pilot prospective cohort clinical study, AYU; 2012; 33(2):197-201.

Kumara Kalyana Rasa (A.F.I. - I, Rasayoga, 20:9 B.R. Balaroga / 163)

सिन्दूरं मौक्तिकं हैम व्योमायो हेम माक्षिकम्।
कन्यातोयेन सम्मर्द्य कुर्यान्मुद्गमिता वटीः॥
वटिका वटिकार्द्धं वा वयोऽवस्थां विवित्त्य च।

(भै.र. 119-120)

Ingredients

- Rasa Sindura- 1 part
- Mukta Bhasma -1 part
- Swarna Bhasma -1 part
- Abhraka Bhasma- 1 part
- Loha Bhasma- 1 part
- Swarna Makshika Bhasma- 1 part
- Kumari Swarsa- Quantity Sufficient.

Method of preparation

Prepare the fine 8 powder of rasa Sindura and add rest of the Bhasmas to it by triturating in Khalva yantra thoroughly. Then this mixture should be triturated with kumari Swarasa and prepare its pills

of Mudga (60 mg.) by weight each uniformly and dry them in shade. On drying, these pills should be stored in glass bottles. This preparation is known as Kumara Kalyana rasa and it destroys all types of Pediatric diseases.

Chemical/phytochemical composition

Loha Bhasma (Fe_3O_4), Abhraka Bhasma [Mg (Al Fe]$_2O_4$ and $KAlSiO_4$ (Si_2O_6), Mukta Bhasma (calcium carbonate- Percentage of calcium as 46.32%), Swarna Makshika ($Fe_2O_3.FeS_2$, Cus and SiO2), Aloe Vera (Emodin alcoctin A, aloenin (Bitter glucoside). barbaloin).

Pharmacodynamics and pharmacokinetics

क्र.सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	रस सिन्दूर	—	—	—	—
2.	मुक्ता भस्म	मधुर	—	शीत	—
3.	स्वर्ण भस्म	मधुर, तिक्त, कषाय	स्निग्ध	शीत	मधुर
4.	अभ्रक भस्म	मधुर	स्निग्ध	शीत	—
5.	लौह भस्म	तिक्त कषाय	रूक्ष, गुरु	शीत	मधुर
6.	स्वर्णमाक्षिक भस्म	मधुर	लघु	शीत	कटु
7.	घृतकुमारी	तिक्त	गुरु, स्निग्ध	शीत	कट

चिकित्सकीय गुण (Therapeutic properties)

क्षीरेण सितया सार्द्धं बालेषु विनियोजयेत् ॥
कुमाराणां ज्वरं श्वासं वमनं पारिगर्भिकम् ।
ग्रहदोषाञ्च निखिलान् स्तन्यस्याग्रहणं तथा ॥
कामलामतिसारञ्च कृशकां वह्निवैकृतम् ।
रसः कुमारकल्याणो नाशयेन्नात्र संशयः ॥
(भै.र. 120-122)

Bala Roga, Jwara, Shwasa, Vamana, Parigarbhika, Grahadosha, Stanyasya, Agrahanam, Kamala, Atisara, Krishata, Agni Vikara.

Matra- $^1/_2$ - 1 pills (62.5 mg)

Anupana- Milk added with sugar, Madhu

Pathyapathya- As per disease condition

Sevana Kala- Twice daily

Ashuddha Apakwa processed, Avidhi Sevanajanya Vyadhi and their Shantyupaya

Kumara Kalyana Rasa having Mukta Bhasma, Abhraka Bhasma, Rasa Sindura, Hema Bhasma, Swarna Makshika, Loha Bhasma etc. this is not prepared properly cause the diseases. For this reason, Shanti Upaya mention in earlier chapter.

Research updates and clinical evidences

- Kumar Kalyana Rasa along with Sitipladi Churna was administered in 12 Children to evaluate its role in child's growth and development. The drug was administered twice a day with honey for a period of three month. Base line assessment was done and the result showed improve digestion, immunity and general growth.
  Reference- Meena Rekhraj, Raj Dinesh K, Indumati Sharma. Meena Narendra K, Parashan Rahul. Role of Kumar Kalyan Ras and Sitopaladi Churna in Children's development. AYUSH DHARA. 2014; 1(2):23-25.
- Kumarkalyana Rasa is Ayurveda drug mainly used for pediatric purpose; this drug offers beneficial effects in the management of breathing problems, cough, jaundice, fever, diarrhea and digestive problems. Kumarkalyana Rasa comprises of Ras Sindoor, Moti Pishti, Swarna Bhasma, Abhrak Bhasma Loha Bhasma and Swarna Makshik Bhasma, etc. Kumarkalyana Rasa gives immuno-stimulatory, adaptogenic & Rasayana effects thus provides antitussive, anti-asthmatic, antibacterial and digestive stimulant effects in children. Kumarkalyana Rasa pacifies Tridoshas, boosts Rasa, Rakta, Asthi & Majja therefore imparts health benefits in anemia, rickets, diarrhea, respiratory disease and improves mental strength.
  Reference- Vidhale VS. Ayurveda Properties and Therapeutics Importance of Kumarkalyan Rasa: A Review. Himalayan Journal of Health Sciences. 2020 Dec 15:54-3.

Garbhapala Rasa (A.F.I. - II, Rasayoga, 16:14, R.T.Sa. Part - I, 140)

Ingredients

- Shuddha Hingula- 1 part
- Naga Bhasma- 1 part
- Vanga Bhasma- 1 part
- Tvaka- 1 part
- Tejapatra- 1 part
- Ela- 1 part
- Shunthi- 1 part
- Maricha- 1 part
- Pippali- 1 part
- Dhanyaka- 1 part
- Krishna Jiraka- 1 part
- Chavya- 1 part
- Mridvika- 1 part
- Devadaru- 1 part
- Lauha Bhasma- 1 part
- Aparajita Swarasa- Quantity sufficient for seven days Bhavana.

Method of preparation

Take all the required dried ingredients clean and free from impurities. Using Khalva Yantra grind each ingredient. Adding of Aparajita Swarsa Bhavana for seven times then dry in sunlight and store in container.

Chemical/phytochemical composition

Hingula (Hgs), Naga Bhamsa (Pb) and (S), Vanga Bhasma (SnO_2) and Loha Bhasma (Fe_2O_3) and all 12 herbs having their specific composition like Twaka- Cinnamaldehyde, engenol, phellandrene, Tejapatra- Eugenol, Cinnamaldehyde, Linalool, Ela- Bornneol, Camphene, P-cymene, Shunthi- Gingerol, α & β Zingiberenes, Zingiberol, Maricha- Piperene, Piperethine, Pippali- Piperene, Piplartine, Dhanyaka- Carotene cugenol, Citronellol, Krishna Jiraka- Essential oil, Triacylgycerols, Chavya- Piperine, Sitosterol, Draksha - Catechin, epicatechin, Devadaru- Atlantone, Sesquiterpenes and Aparajita- Aparajitin, Tarxerol, Taraxerone.

Pharmacodynamics and pharmacokinetics

क्र.सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	हिंगुल	कषाय, कटु, तिक्त	—	—	—
2.	नाग भस्म	मधुर, तिक्त	स्निग्ध लेखन सर उष्ण	—	—
3.	वंग भस्म	तिक्त, कषाय	लघु, शीत, रूक्ष	—	—
4.	त्वक्	कटु,तिक्त,मधुर	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
5.	तेजपत्र	कटु,मधुर	तीक्ष्ण,लघु	उष्ण	कटु
6.	एला	कटु,मधुर	लघु,रूक्ष	शीत	कटु
7.	शुण्ठी	कटु	गुरु,रूक्ष,तीक्ष्ण	उष्ण	मधुर
8.	मरिच	कटु	लघु, तीक्ष्ण	उष्ण	कटु
9.	पिप्पली	कटु	लघु, तीक्ष्ण, स्निग्ध	उष्ण	मधुर
10.	धान्यक	कषाय,तिक्त	लघु, स्निग्ध	उष्ण	मधुर
11.	कृष्णजीरक	कटु	रूक्ष	उष्ण	कटु
12.	चव्य	कटु	लघु, रूक्ष	उष्ण	कटु
13.	द्राक्षा	मधुर	स्निग्ध, गुरू, मृदु	शीत	मधुर

14.	देवदारू	तिक्त, कटु कषाय	लघु, रूक्ष	उष्ण	कटु
15.	लौहभस्म	कषाय, तिक्त	रूक्ष, गुरू	शीत	मधुर
16.	अपराजिता	कटु, तिक्त कषाय	लघु, रूक्ष	शीत	कटु

चिकित्सकीय गुण (Therapeutic properties)

Garbhapata, Garbhastrava, Garbhini Roga, Pradara , Shula, Vibandha, Triroga, Chardi and Agnimandya.

Matra - 1 to two Ratti (125-250mg)

Anupana - Draksha, water

Pathyapathya - Ushna Tikshna Dravya, Vyayama and Asana are contraindicated

Sevana Kala- Twice daily

Kala Maryada-

मासप्रथममारभ्य नवमासतमेव च ॥ (भै.र. 68/96)

First and Nine Month.

Ashuddha Apakwa processed, Avidhi Sevanajanya Vyadhi and their Shantyupaya

अशुद्धो दरदः कुर्यादान्ध्यं क्षैण्यं क्लमं भ्रमम्।
मोहं मेहं च संशोध्यस्तस्माद् वैद्यस्तु हिङ्गुलः ॥
(आ.प्र. 2/73)

Ashuddha Hingula Sevana causes Andhata, Kshinata, Glani, Murcha and Prameha.

Research updates and clinical evidences

- Acute toxicity study done on Garbhapal Rasa in the dose of 1, 2, 5 and 5 gm/kg + control show no acute toxicity up to 5000 mg/kg. In this study drug was given orally for 30 consecutive days. It has clearly demonstrate the nontoxic nature and high safety profile of Garbhapal Ras in rodents.

  Reference- Mishra D et al; Acute and sub-chronic toxicity studies of Ayurvedic medicine 'Garbhapal Ras, Electronic Journal of Pharmacology and therapy. 2008, 1:31-34.
- Clinical trial done on 170 Pregnant women and haematological and biochemical parameters were observed. Normal haematological picture maintained renal and liver function tests show nontoxic nature of Garbhpala Rasa.

  Reference- Mishra D et al J Clinical Trial of Garbhapal Ras in Pregnancy Outcome; Res. Educ. Indian Med; Jan-March. 201, 18(1):13-19.

Chandraprabha Vati (A.F.I. - I, Vati Gutika, 12:10, Sha.Sa.M.7/40)

चन्द्रप्रभा वचा मुस्तं भूनिम्बामृतदारुकम्।
हरिद्राऽतिविषा दार्वी पिप्पली मूल चित्रकौ ॥
धान्यकं त्रिफला चव्यं विडङ्ग गजपिप्पली।
व्योषं माक्षिक धातुश्च द्वौक्षारौ लवणत्रयम् ॥
एतानि शाणमात्राणि प्रत्येकं कारयेदबुधः।
त्रिवृद्दन्ती पत्रं च त्वगेला वंशरोचना ॥
प्रत्येकं कर्षमात्रं च कुर्यादेतानि बुद्धिमान्।
द्विकर्ष हतलोहं स्याच्चतुष्कर्षा सिता भवेत् ॥
शिलाजत्वष्टकर्षं स्यादष्टौ कर्षास्तु गुग्गुलोः।
एभिरेकत्र संक्षुण्णैः कर्तव्या गुटिका शुभा ॥
(शा.म. 7/40-44)

Ingredients

- Chandraprabha- 1 part
- Vacha- 1 part
- Musta- 1 part
- Kiratatikta- 1 part
- Guduchi- 1 part
- Devadaru- 1 part
- Haridra- 1 part
- Ativisha- 1 part
- Darvi- 1 part
- Pippali- 1 part
- Chitraka- 1 part
- Dhanyaka- 1 part

- Haritaki- 1 part
- Bibhitaki- 1 part
- Amalaki- 1 part
- Chavya- 1 part
- Vidanga- 1 part
- Gajapippali- 1 part
- Shunthi- 1 part
- Maricha- 1 part
- Pippali- 1 part
- Maksika Bhasma- 1 part
- Yava Kshara- 1 part
- Sarji Kshara- 1 part
- Saindhava Lavana- 1 part
- Sauvarcala Lavana- 1 part
- Vida Lavana- 1 part
- Trivrita- 4 part
- Danti- 4 part
- Tejapatra- 4 part
- Tvaka- 4 part
- Ela- 4 part
- Vamshalochana- 4 part
- Lauha Bhasma- 8 part
- Sita- 16 part
- Shilajatu- 32 part
- Guggulu 32 part

Method of preparation

Take all the required dried ingredients clean and free from impurities. Using Khalva Yantra grind each ingredient. Add remaining ingredients and pounding properly until it becomes suitable for making tablets or pills. Once fully dried, collect the dried material. This final product is called Chandraprabha Vati.

Chemical/phytochemical composition

Fe, Cl, K, Na, Si, Ca, Al, S, Mg, P and O elements.

Pharmacodynamics and pharmacokinetics

क्र.सं.	द्रव्य	Phytochemicals	रस	गुण	वीर्य	विपाक
1.	चन्द्रप्रभा (कर्पूर)	Campher, Campherol, Cineol etc.	तिक्त,कटु,मधुर	लघु,रूक्ष	शीत	कटु
2.	वचा	Acolamone, Acorenone acoramone etc.	कटु,तिक्त	लघु,रूक्ष	उष्ण	कटु
3.	मुस्ता	Cineal, Copadiene, eopaene etc.	तिक्त,कटु,कषाय	लघु,रूक्ष	शीत	कटु
4.	किरात तिक्ता	Amarogentin, Swertianin Swertinin etc.	तिक्त	लघु,रूक्ष	शीत	कटु
5.	गुडुची	Tinosporin, Tinosporide Cordifolide etc.	तिक्त, कषाय	गुरु,स्निग्ध	उष्ण	कटु
6.	देवदारु	Deodarin, Toxifolin etc	तिक्त,कटु,कषाय	लघु,रूक्ष	उष्ण	कटु
7.	हरिद्रा	Crucumene, Curcone crucumenone etc.	तिक्त, कटु	रूक्ष,लघु	उष्ण	कटु
8.	अतिविषा	Atidine, Atisine, Hetisine etc.	कटु, तिक्त	लघु,रूक्ष	उष्ण	कटु
9.	दारुहल्दी	Berberine, Karachina etc.	तिक्त, कषाय	लघु,रूक्ष	उष्ण	कटु
10.	पिप्पलीमूल	Piperine, β-sitosterol etc.	कटु	लघु,रूक्ष	उष्ण	कटु

11.	चित्रक	Chitronone, Plumbagin etc.	कटु	लघु,रूक्ष,तीक्ष्ण	उष्ण	कटु
12.	धान्यक	Carotene, Cugenol Coriandrinol etc.	कषाय, तिक्त	लघु, स्निग्ध	उष्ण	मधुर
13.	हरीतकी	Chabulinic acid, Tannic acid etc	पंचरस लवण वर्ज्य	लघु, स्निग्ध	उष्ण	मधुर
14.	विभीतकी	Fructose, Mannitol etc.	कषाय	लघु, रूक्ष	उष्ण	मधुर
15.	आमलकी	Vit C, Phyllemblin, Linolic acid etc.	अम्ल प्रधान पंच रस लवर्ण वर्ज्य	लघु, रूक्ष	शीत	मधुर
16.	चव्य	Piperine, Sitosteral etc.	कटु	लघु,रूक्ष	उष्ण	कटु
17.	विडंग	Embelin, Christembine etc.	कटु, कषाय	लघु,रूक्ष,तीक्ष्ण	उष्ण	कटु
18.	गजपिप्पली	Embelin, Christembine etc.	कटु,कषाय	लघु,स्निग्ध,तीक्ष्ण	उष्ण	कटु
19.	शुण्ठी	Gingerol, α & β Zingiberemes etc.	कटु	गुरु,रूक्ष,तीक्ष्ण	उष्ण	मधुर
20.	मरिच	Piperene, Piperethine etc.	कटु	लघु, तीक्ष्ण	उष्ण	कटु
21.	पिप्पली	Piperene, Piperethine etc.	कटु	लघु,स्निग्ध,तीक्ष्ण	उष्ण	मधुर
22.	माक्षिक	Cu, Fe, S etc.	मधुर	लघु	शीत	कटु
23.	यवक्षार (यव)	—	—	लघु, स्निग्ध	—	—
24.	सर्जीक्षार	—	कटु	तीक्ष्ण, उष्ण	—	—
25.	सैन्धव लवण	NaCl (मुख्य रूप से)	लवण	स्निग्ध	नोष्ण	—
26.	सौवर्चल लवण	NaCl (मुख्य रूप से)	लवण	विशद,लघु,स्निग्ध	उष्णङ	—
27.	विड लवण	NaCl (मुख्य रूप से)	लवण, क्षारयुक्त	तीक्ष्ण,उष्ण,लघु	—	—
28.	त्रिवृत	α & β and Turpethine, Turpethinic acids etc.	कटु,तिक्त	लुघ,रूक्ष, तीक्ष्ण	उष्ण	कटु
29.	दन्ती	Baliospermin, Monatanin etc.	कटु	गुरू,तीक्ष्ण	उष्ण	कटु
30.	तेजपत्र	Eugenol, Cinamic aldehyade etc	कटु,मधुर	लघु,तीक्ष्ण	शीत	कटु
31.	एला	Bornneol, Camphere etc.	कटु,मधुर	लघु,रूक्ष	शीत	कटु
32.	त्वक्	Cinnamaldehyde, Eugenol etc.	कटु,तिक्त, मधुर	लघु,रूक्ष, तीक्ष्ण	उष्ण	कटु
33.	वंशलोचन	Siliceous crystals	—	—	—	
34.	लौहभस्म	Fe_2O_3	तिक्त, कषाय	रूक्ष, गुरू	शीत	मधुर
35.	शिलाजतु	Fulvic acid etc.	तिक्त, कटु	—	उष्ण	कटु
36.	गुग्गुलु	2 and E guggulsterone etc.	तिक्त, कटु	लघु,रूक्ष,	उष्ण	कटु

चिकित्सकीय गुण (Therapeutic properties)

प्रमेहान्विशंति कृच्छ्रं मूत्राधातं कृच्छ्रं मूत्राघातं तथाश्मरीम् ॥
विबन्धाऽऽनाहशूलादि मेहनं ग्रीवामबुर्दम् ।
अन्त्रवृद्धिं कटीशूलं श्वासकास विचर्चिकाम् ॥
अण्डवृद्धि तथा पाण्डुं कामला च ह्लीमकाम् ।
कुष्ठान्यर्शांसि कण्डूं च प्लीहोदर भगन्दरम् ॥
दन्तरोगं नेत्ररोगं स्त्रीणामार्तवजां रुजम् ।
पुंसां शुक्रगतान् दोषान् मन्दाग्निमरुचिं तथा ॥
वायुं पित्तं कफं हन्याद् बल्या वृष्या रसायनी ।
चन्द्रप्रभायां कर्षस्तु चतुःशाणो विधीयते ॥
(शा.म. 7/45-49)

Vibandha, Shula, Granthi, Pandu, Kamala, Muttakruccha, Prameha, Ashmari, Arsha, Mutraghata, Arbuda, Kushta, Bhangadara, Dantaroga, Netraroga, Aruchi, Mandagni, stri Roga, Artava Ruja, Shukra Dosha and Daurbalya.

Study done on Aqueous extract of Chandraprabha Vati shows that it is having lysozyme fibrillation inhibition activity which is helpful in order to prevent the amyloidosis. It is also seen in the study complete inhibition of fibrillation is due to aqueous extract of herebalome of Chandraprabha Vati while none of the thirty ingredients of it was able to prevent the reaction, solely. Reference- A Kumari, SA Muthu, P Prakash, B Ahmed, Herbalome of Chandraprabha Vati a poly herbal formulation of Ayurveda prevents fibrillation of lysozyme by stabilizing aggregation - prone intermediate state. International Journal of Biological Macromolecules 148(2020).

Matra- 250- 500 mg

Anupana-Water, Dugdha

Sevana Kala-Twice daily

Research updates and clinical evidences for each of the following formulations

- Animal study done on Chandraprabha Vati to assess its safety profile where 4000 mg/kg daily dose was orally administered for 7 days. While for the estimation of creatinine clearance 2000 mg/kg dose of test drug was given. The highest dose of Chandraprabha Vati induced a marked and significant (P <0.05) increase by 358% in glomerular filtration rate at 1 has examined by creatinine clearance. The highest dose of drug did not provoke any evert signs of toxicity, stress or aversive behaviour.

  Reference - Evidence based safety of Ayurvedic Herbo mineral formalatiins. CCRAS. Ministry of AYUSH Govt. of India New Delhi.
- Observational study done on clinical safety of Chandraprabhavati reveals that no serious adverse reactions or toxicity symptoms were seen with the drug. The drug was administered orally at doses of 500-1000 mg/day even 1-4 month.

  Reference- Tripathi AK, Pandey SD., Sastry JLN., Vedula S. Observations on Clinical safety of Chandraprabha Vati. An Ayurvedic

Pravala Panchamrita Rasa (A.F.I. - II, Rasayoga; 16:37, B.R. Gulma / 139, Yoga Ratnakara Gulma Chikitsa 132-136)

प्रवालमुक्ता फल शङ्ख शुक्ति कर्दिकानां च समांशभागम् ।
प्रवाल मात्रं द्विगुणं प्रयोज्यं सर्वैः समांशं रविदुग्ध मेव ॥
एकीकृतं तत्खलु भाण्डमध्ये क्षिप्त्वा मुखे बन्धनमत्र योज्यम्॥
पुटं विदध्यादतिशीतले च उद्धृत्य तद्भस्म क्षिपेत्करण्डे ॥
(भै.र. 32/113-114)

Ingredients

- Pravala Bhasma- 2 parts
- Mukta Bhsma- 1part
- Shnakha Bhasma- 1part
- Shukti Bhasma- 1 part
- Varatika Bhasma- 1part
- Arka Kshira- Quantity sufficient

Method of preparation

Mix all the Bhasmas by triturating with Arka Kshira in Khalva Yantra. Prepare its pillets and kept in Sharava Samputa. Then it should be subjected to heating process through Bhanda Puta system. On self-cooling the content should be procured and powdered micro finely and stored in airtight glass

containers. This preparation is known as Pravala Pancha Amutra Rasa and it is the best formulation to cure all the diseases.

Chemical/phytochemical composition- Calcium is the major composition

Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	प्रवाल	मधुर, क्षार	लघु, शीत	–	–
2.	मोती	मधुर	–	शीत	–
3.	शङ्ख	क्षार	शीत, ग्राही	–	–
4.	शुक्ति	मधुर	स्निग्ध	–	–
5.	कपर्दिका	–	उष्ण	–	–
6.	अर्कक्षीर	कटु, तिक्त	लघु, रूक्ष	उष्ण	कटु

चिकित्सकीय गुण (Therapeutic properties)

आनाहगुल्मोदरप्लीहकासश्वासाग्निमान्धान् कफमारुतोत्थान्।

अजीर्णमुद्गारहृदामयघ्नं ग्रहण्यतीसारविकारनाशनम् मेहामयं मूत्ररोगं मूत्रकृच्छ्रं तथाऽश्मरीम्।

नाशयेन्नात्र सन्देहः सत्यं गुरुवचो यथा।
नाशयेन्नात्र सन्देहः सत्यं गुरुवचो यथा।
पथ्याश्रितं भोजनमादरेण समाचरेन्निर्मलचित्तवृत्त्या।
प्रवालपञ्चामृतनामधेयो योगोत्तमः सर्वगदपहारी॥

(भै.र. 32/115-119)

Anaha, Gulma, Udara, Plihodara, Kasa, Shwasa, Agnimandya, Kpaha Vata Roga, Ajirna, Udagara, Hridroga, Grahani, Atisara, Prameha, Mutraroga, Mutrachruccha and Ashmari.

Matra- 250 mg

Anupana- In Gulma Roga Punarnava Kwatha id Anupana, in pitta Roga Madhu is Anupana.

Research updates and clinical evidences

- The percentage of Calcium (wt %) in Praval Panchamrita Rasa is 46%. Reference- Usha Sharma & Sheenama Rani)2023). Review on Praval Panchamrita Rasa : A Natural calcium supplement. Sch Int J Tradit complement Med, 6(9):134-139.
- Praval Panchamrita Rasa along with Dinzar Rasayan, Kandudha Rasa, Laghusutshekhar Rasa, Yastimadhu Churna, Praval Bhasma and other durgs was demonstrate successful management of high gade NHL DLBCL. This study was reported as single case study. Reference- Narayan Bendale Kadam A. Patil A. Kantilal Birari Ga wande P. complete tumor regression with exclusive Ayurvedic Rasayana regimen in high grade diffuse large B-cell lymphoma: A case report. Clin case Rep. 2022 Apr 14;10(4).

Anandbhairava Rasa
A.F.I. - I, Rasayoga, 20:3
R.Sa.Sa.Jwara 2/103

हिङ्गु च विषं व्योषं मरिचं टङ्कणं कणा।
जाती कोष समंचूर्ण जम्बीर द्रव मर्दितम्॥
रक्तिमानां वटीं कुर्यात् खादेदार्द्रक संयुताम्।
वटीद्वय त्रयं वाऽपि सन्निपाते सुदारूणे॥

(र.सा.सं. 2/103-104)

Ingredients

- Shuddha Hingula- 1 part
- Shuddha Vatsanabha- 1 part
- Shunthi- 1 part
- Pippali- 2 part
- Maricha - 2part
- Shuddha Tankana- 1 part
- Jatiphala- 1 part
- Jambira Swarasa- Quantity Sufficient

Method of preparation

Mix all the ingredients by triturating with Jambira Swarasa in Khalva Yantra. After that make the pills, store in the airtight container.

Chemical/phytochemical composition

Hingula (HgS), Shuddha Tankana ($Na_2B_4O_7.5H_2O$)

Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	Phytochemicals composition	रस	गुण	वीर्य	विपाक
1.	हिङ्गुल	—	कषाय, कटु तिक्त	—	—	—
2.	टंकण	—	कटु	तीक्ष्ण, उष्ण, सर	—	—
3.	वत्सनाभ	Aconitine, Aconine pseudoaconitine etc.	मधुर	लघु, रूक्ष, तीक्ष्ण व्यवायी, विकाशी	उष्ण	कटु
4.	शुण्ठी	α β Zingiberenes, Zingi beryl etc.	कटु	गुरू, रूक्ष, तीक्ष्ण	उष्ण	मधुर
5.	पिप्पली	Piperene, Piplartine etc.	कटु	लघु, स्निग्ध, तीक्ष्ण	उष्ण	मधुर
6.	मरिच	Piperene, Piperethine etc.	कटु	लघु, तीक्ष्ण	उष्ण	कटु
7.	जायफल	β pinene, Myristicin, Myristic acid etc.	तिक्त, कटु	लघु, तीक्ष्ण	उष्ण	कटु
8.	निम्बू	Abscisic acid, Abseisin II etc.	अम्ल, कटु	लघु, तीक्ष्ण	उष्ण	अम्ल

चिकित्सकीय गुण (Therapeutic properties)

ज्वरमष्ट विधं हन्ति तथाऽतीसारनाशनः ।
जीर्णज्वरहरश्चैव तथा सर्वाङ्गभेदकः ॥
आमवातादि रोगान् च नाशयेदविकल्पतः ॥
(र.सा.सं.ज्वर 105)

In Jwara, Jwaratisara, Amavata, Sannipata Jwara, Jirna Jwara Annadabhairava Rasa is used.

Matra- 250 mg

Anupana- Adraka Swarasa

Pathyapathya- Acc. To disease condition.

Sevana Kala- Twice daily

Ashuddha Apakwa processed, Avidhi Sevanajanya Vyadhi and their Shantyupaya

अविशुद्धं विषं दाहं मोह हृदगतिरोधनम् ।
मृत्युञ्च विदधात्याशु तस्मातं परिशोधयेत् ॥
(j.le. 24/18)

Ashuddha Vatsanabha cause Daha, Murccha, Hrudagati Rodha, Mrutyu etc.

Research updates and clinical evidences

- Arogya vardhini vati and Anand Bhairava Ras were found to cure intestinal amoebiasis of rat and hepatic amoebiasis of golden hamster. Both of drugs were found to be amoebicidal against trophozoites of Entramoeba histolytica at 500 mg/ml in vitro and cured caecal amoebiasis of rat at 200 mg/kg/dose/5 days in vivo. Reference- Shukla SC, Chakraborty E. Tewari G, Das SR. Arogya vardhini vati and Anand bhairava rasa : Two amoebicidal ayurvedic drugs. Anc Sci Life. 1990 Jul; 10(1):56-8.
- Anand Bhairava Rasa is found reported to be effective in the management of Vata Kaphaja Jwara. The study was done in 20 patients to whom 250 mg of drug given Abhakata twice a day with luke warm water for seven days. Route of drug administration was oral and follow up was done every day. Reference - Pudale S, Shinde DL, Palieal A, Pawar VB. A comparative study of Anand Bhairav Rasa and Tribhuvana Kirti Rasa in the Management of Vata Kaphaja Jwara. UGC care Group I Journal 45(3); July-Sep. 2022;133-148.

Yogendra Rasa
A.F.I. - I, Rasayoga, 20:31, B.R. Vatavyadhi 26/160-166

विशुद्धं रससिन्दरं तदर्द्धं शुद्धहाटकम्।
तत्समं कान्त लौहञ्च तत्समञ्चाभ्रमेव च॥
विशुद्धं मौक्तिकञ्चैव वङ्गञ्च तत्समं मतम्।
कुमारिकारसैर्भाव्यं धान्यराशौ दिनत्रयम्॥
ततो रक्तिद्वयमितां वटीं कुर्याद्विचक्षणः।
योगवाही रसो ह्येष सर्वरोगकुलान्तकः॥
(भै.र. वातव्याधि 506-08)

Ingredients

- Vishuddha Rasa Sindura- 4 parts
- Swarna Bhasma- 1part
- Kanta Loha Bhasma-1 part
- Abhraka Bhasma- 1 part
- Mukta Pishti- 1part
- Vanga Bhasma- 1part
- Kumari Swarasa- Bhavana Dravya- Quantity Sufficient

Method of preparation

Mix all the ingredients by triturating with Kumari Swrasa in Khalva Yantra. Prepare its bolus and packed in Eranda leaves. Then it should be kept in heap of paddy grains for three days. Later on, it should be collected, powdered. Then prepare its pills of two Ratti (250 mg.) and dry them in shade. On drying these should be stored in glass bottles. This preparation is known as Yogendra rasa and it has been formulated by Krishnatreya.

Chemical/phytochemical composition

Rasa Sindura (HgS) Swarna Bhasma (Au nanoparticles), Loha Bhasma (Fe_2O_3 / Fe_3O_4), Abhraka Bhasma (KMg_3 (Si_3Al) O_{10} $(OH)_2$), Mukta Bhasma ($CaCO_3$) and Vanga Bhasma (SnO_2).

Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	रस सिन्दूर	–	–	–	–
2.	स्वर्ण भस्म	मधुर, तिक्त, कषाय	स्निग्ध	शीत	मधुर
3.	लौह भस्म	तिक्त, कषाय	रूक्ष, गुरु	शीत	मधुर
4.	अभ्रक भस्म	मधुर	स्निग्ध	शीत	–
5.	मुक्ता भस्म	मधुर	–	शीत	–
6.	वंग भस्म	तिक्त, कषाय	लघु, रूक्ष, शीत	–	–

चिकित्सकीय गुण (Therapeutic properties)

वातपित भवान् रोगान् प्रमेहान् बहुमूत्रताम्।
मूत्राघातमपस्मारं भगन्दरगुदामयम्॥
मूर्च्छोन्यादञ्च यक्ष्माणं पक्षाघातं हतेन्द्रियम्।
शूलाम्लपित्तं हन्ति भास्करस्तिमिदं तथा॥
त्रिफलारसयोगेन शुभया सितयापिवा।
भक्षयित्वा भवेद्रोगी कामरूपी सुदर्शनः॥
रात्रौ सेव्यं गवांक्षीरं कुशानाञ्च विशेषतः।
(भै.र.वात 509-11)

Vata Pittaja Roga, Prameha Bahumutrata, Mutraghata, Apasmara, Bhadandara, Arsha, Murccha, Unmada, Yakshma, Pakshaghata, Hatendriya, Shula and Amlapitta.

Matra- 125- 250 mg

Anupana- Triphala Kwatha, Godugdha at night time in weak person, Sita

Pathyapathya- According to disease condition

Sevana Kala- Twice daily

Research updates and clinical evidences

- Single case study done in managing monomorphic ventricular tachycardia without

cardio version where Dadimastaka churna 2g + Yogendra Rasa 125 mg, Swaragairika 125 mg twice daily with Mahatriphala Ghrita 5 ml. was administered. At bed time Kutki churna 2g with castor oil 10 ml was also given. Abhyarishta was adminstered 15 ml BD half on hour before meal with amount of water. After 8 days symptomatic relief was observed and after 24 days a normal ECG was observed. Study of Yogendra Rasa in Zebrafish model validate the efficacy in ameliorating drug induced cardiac hypertrophy. Reference- Kajaria D. Khobarkar PN. Managing monomorphic ventiricular tachycardia without cardio version : A case report. J Ayurveda Integr Med. 2023 Mar Apr; 14(2):100654. Reference- Balkrishna A. Rustagi Y, Bhattacharya K. Varshyny A. Application of Zbera fish model in the suppression of drug-induced cardiac Hypertrophy by Traditional Indian Medicine Yogendra Ras. Biomolecules. 2020 Apr 13;10(4):600.

- Yogendra Rasa has a positive add-on effect in management of patients with Pakshaghata. No clinical side effect was seen due to Yogendra Rasa in patients of Pakshaghata. Reference- Kaushish S, Shinde DL, Pawar VB. The Efficacy of Yogendra Rasa in Pakshaghata. Bull. Env. Pharmacol. Life Sci. 2023 Oct 11;12:06-16.

Laxmivilas Rasa
A.F.I. - I, Rasayoga, 20:39, B.R. Rasayana / 55

पलं कृष्णाभ्रचूर्णस्य तदर्द्धो रसगन्धकौ।
तदर्द्ध चन्द्रसंज्ञस्य जातीकोषफले तथा॥
वृद्धदारक बीजञ्च बीजं धुस्तूरकस्य च।
त्रैलोक्य विजया बीजं विदारीमूलमेव च॥
नारयणी तथा नागबला चातिबला तथा।
बीजं गोक्षुरकस्यापि नैचुलं बीजमेव च॥
एतेषां कार्षिकं चूर्णं पर्णपत्ररसैः पुनः।
निष्पिष्य वटिका कार्या त्रिगुञ्जाफल मानतः॥
(भै.र.रसा. 55-58)

Ingredients

- Abhraka Bhasma- 4 parts
- Shuddha Parada- 2 parts
- Shuddha Gandhaka- 2 parts
- Karpura- 1 part
- Jatiphala- 1 part
- Vriddha Adaraka - 1 part
- Dhattura- 1 part
- Viajaya Beeja- 1 part
- Vidarimula- 1 part
- Shatavari- 1 part
- Nagabala- 1 part
- Atibala-1 part
- Gokshura- 1 part
- Nichula Beeja- 1 part
- Nagavalli - Quantity Sufficient

Method of preparation

Prepare the Kajjali of Shuddha Parada and Shuddha Gandhaka first by triturating in Khalava Yantra. Add fine powder of rest of the ingredients to it and triturate in water. Prepare its pills of two Guna each uniformly and dry them in shade. On drying, these pills should be stored in glass bottles.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र. सं.	घटक द्रव्य	Phytochemicals/Chemical composition	रस	गुण	वीर्य	विपाक
1.	अभ्रक भस्म	$KMg_3(Si_3Al)O_{10}(OH)_2$	मधुर	स्निग्ध	शीत	—
2.	शुद्ध पारद	—	—	—	—	—
3.	शुद्ध गन्धक	—	कटु, मधुर	सर	उष्ण	कटु
4.	कर्पूर	Campher, campherol, cineal etc.	तिक्त, कटु, मधुर	लघु, रूक्ष	शीत	कटु

5.	जातीकोश (जावित्री)	β-pinene, α-terpiene etc.	तिक्त, कटु	लघु, तीक्ष्ण	उष्ण	कटु
6.	जायफल	Myristicin, myristic acid etc.	तिक्त, कटु	लघु, तीक्ष्ण	उष्ण	कटु
7.	वृद्धदारु	Oleic acid, Eragine, Isoeragine etc.	कषाय, कटु, तिक्त	लघु, स्निग्ध	उष्ण	मधुर
8.	धतूरा	Daturadiol, daurolone etc.	तिक्त, कटु	लघु, रूक्ष	उष्ण	कटु
9.	भंगा	Cannabind, Cannabidiol etc.	तिक्त	लघु, तीक्ष्ण, व्यवायी	उष्ण	कटु
10.	विदारीमूल	β-Sitosterol, etc.	मधुर	गुरु, स्निग्ध	शीत	मधुर
11.	शतावरी	Sarsapogenin, sitosterol etc.	मधुर, तिक्त	गुरु, स्निग्ध	शीत	मधुर
12.	नागबला	β-phenenthylamines, quinazoline etc.	मधुर, कषाय	गुरु, स्निग्ध	शीत	मधुर
13.	अतिबला	Hescoses, β-Sitosterol, etc.	मधुर	लघु, स्निग्ध	शीत	मधुर
14.	गोक्षुर	β-Sitosterol, Chlorogenin etc.	मधुर	गुरु, स्निग्ध	शीत	मधुर
15.	निचुल बीज	Gallic acid, Stigmasterol triterpenoids etc.	तिक्त, कटु	लघु, रूक्ष	उष्ण	कटु
16.	पर्णपत्र	Phytosterols, tannins, phenols etc.	तिक्त, कटु	लघु	उष्ण	कटु

चिकित्सकीय गुण **(Therapeutic properties)**

निहन्ति सन्निपातोत्थान् गदान् धोरान् चतुर्विधान्।
वातोत्थान पैतिकांश्चैव नास्त्यत्र नियमः क्वचित॥
कुष्ठमष्टादशाख्यञ्च प्रमेहान विंशति तथा।
नाड़ीव्रणं व्रणं घोरं गुदामय भगन्दरम्॥
श्लीपदं कफवातोत्थं रक्तमांसादितञ्च यत्।
मेदोगतं धातुगतं चिरजं कुलसम्भषम्॥
गलशोथमन्त्रवृद्धिमतीसारं सुद्वारूणम्।
आमवातं सर्वरूपं जिह्वास्तम्भं गलग्रहम्॥
उदरं कर्णनासास्ति मुखवैकृत्यमेव च।
कासपीनसयक्ष्मार्शः स्थौल्यदौर्गन्धयनाशनऽ॥
सर्वशूलं शिरःशूलं स्त्रीणां गदनिबूदनम्।
(भै.र.रस. 59-641/2)

Udara, Prameha, Dhatukshaya, Urdhwanga Roga, Nadi Vrana, Kushta, Vrana, Guda Roga, Bhagandara, all types of Shlipada, Galashosha, Antravruddhi, Atisara, Amavata, Jihva Stambha, Galagraha, Mukha Karna Nasa Akshi Vikruti, Kasa, Pinasa, Yakshama, Arsha and Sthoulya.

Matra- 250mg

Anupana- Tambula Swarasa, Madhu, Dugdha

Pathyapathya- Dugdha, Shali, Mudga etc.

Sevana Kala- Twice daily

Research updates and clinical evidences

- Clinical study done on 100 patients of vertigo along with Goghrita Nasya has significanct effect on vertigo (Bhrama). The duration of trial was two months. The study open randomized. Reference- Padavi DM. Sawant S. Makhigani BN. Study to evaluate the effect of Nardiya Laxmivilas Rasa and Goghrita Nasya in Vertigo (Bhrama); J Ayurveda Integr Med Sci. 30-35.
- Study done of Mahalaxmi Vilas Rasa (AFI 20:27) shows the presence of Mercury, Sulphur, Calcium, Copper, Gold, Iron & Tin etc. XRD study indicate that prepared drug contained free sulphur, cinnabar, cassiterite (Tinoxide Vange Bhasma) orpiment (Hartala, arsenic III sulphide) and mica (lencite/zeolite Abhraka Bhasma). Reference- Srikanth N Singh A, Ota S, Shreedhar B. Galib, Bhiman

KS. Chemical characterization of an Ayurvedic herbo mineral preparation. Maha laxmivilas Rasa. J. Ayurveda Integr Med. 2019 Oct-Dec; 10(4):262-268.

Vasantakusumakara Rasa
A.F.I. - I, Rasayoga,20:42,
R.Sa.Sa.Rasayana Vajikarana

द्विभागं हाटकं चन्द्रं त्रयो वङ्गाहिकान्तकाः ।
चतुर्भागं शुद्धमभ्रं प्रवालं मौक्तिकं तथा ॥
भावयेद् गव्य दुग्धेन भावनेक्षुरसेन च ।
वासालाक्षा रसोदीत्त्यरम्भा कन्द प्रसूनकैः ॥
शतपत्ररसेनैव मालत्याः कुङ्कुमोदकैः ।
पश्चान्मृगमदैर्भाव्यं सुगन्धिरससंभवैः ॥
कुसुमाकरविख्यातो वसन्तपदपूर्वकः ।
गुञ्जाद्वयेन संसेव्यः सितामध्वाज्यसंयुतः ॥

(र.सा.स.र.सा. 80-83)

Ingredients

- Swarna Bhasma- 2 parts
- Rajata Bhasma- 2 parts
- Vanga Bhasma- 3 parts
- Naga Bhasma- 3 parts
- Kanta Loha Bhasma- 3 parts
- Abhraka Bhasma- 4 parts
- Pravala Bhasma- 4 parts
- Mukta Bhasma- 4 parts

Bhavana Dravya

- Godugha -Quantity Sufficient
- Ikshu Rasa-Quantity Sufficient
- Vasa Swarasa-Quantity Sufficient
- Laksha Rasa -Quantity Sufficient
- Udichya Kwatha-Quantity Sufficient
- Kadali Kanda Rasa-Quantity Sufficient
- Satapatara Swarasa-Quantity Sufficient
- Malatipushpa-Quantity Sufficient
- Kumkuma Jala-Quantity Sufficient
- Kasturi Jala-Quantity Sufficient

Method of preparation

Mix all the ingredients by triturating in Khalava Yantra. Then levigate it with Bhavana Dravyas for each one day. Prepare its pills of two Guna by weight and dry them in shade. This preparation is known as Vasanta Kusumakara Rasa and its should be stored in airtight glass bottle.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र. सं.	घटक द्रव्य/ भावना द्रव्य घटक द्रव्य	Chemicals/Phytochemical composition	रस	गुण	वीर्य	विपाक
1.	स्वर्ण भस्म	Nanosized gold particle	कषाय तिक्त मधुर	स्निग्ध	शीत	मधुर
2.	रजत भस्म	Ag, S.	कषाय, अम्ल	स्निग्ध, सर	शीत	मधुर
3.	वंग भस्म	SnO_2	तिक्त, कषाय	लघु, रूक्ष, शीत	—	—
4.	नाग भस्म	PbS	मधुर, तिक्त	उष्ण, स्निग्ध	—	—
5.	लौह भस्म	Fe_2O_3 / Fe_3O_4	तिक्त, कषाय	गुरू, रूक्ष	शीत	मधुर
6.	अभ्रक भस्म	$KMg_3(Si_3Al)O_{10}(OH)_2$	मधुर	स्निग्ध	शीत	—
7.	प्रवाल भस्म	$CaCO_3$	क्षार, मधुर	लघु, शीत	—	—
8.	मुक्ता भस्म	$CaCO_3$	मधुर	—	शीत	—

	भावना द्रव्य-					
1.	गोदुग्ध	Fat, Vitamin etc.	मधुर	गुरु, स्निग्ध	शीत	मधुर
2.	इक्षु	Carbohydrates	मधुर	गुरु, स्निग्ध	शीत	मधुर
3.	वासा	Vasicine, vasicinone etc.	तिक्त, कषाय	लघु,रूक्ष	शीत	कटु
4.	लाक्षा	Resin etc.	कषाय	लघु, स्निग्ध	शीत	—
5.	कदली	5-hydroxytryptamine	मधुर	गुरु, स्निग्ध	शीत	मधुर
6.	शतपत्र	Essential oil etc.	तिक्त, कषाय मधुर	लघु, स्निग्ध	शीत	मधुर
7.	मालती	Indole, cisjaamone etc.	तिक्त, कषाय	लघु, स्निग्ध मृदु	उष्ण	कटु
8.	उदीच्य	Ageretochromene etc.	तिक्त	रूक्ष, लघु	शीत	—
9.	मृगमद (कस्तूरी)	Oleine, cholesterin etc.	तिक्त, कटु	लघु, रूक्ष तीक्ष्ण	उष्ण	कटु

चिकित्सकीय गुण (Therapeutic properties)

मेहघ्नः कान्तिदश्चैव कामदः पुष्टिदस्तथा।
वली पलितहश्चैव स्मृतिभ्रंशं विनाशयेत्॥
तुष्टिदो बल्यमायुष्यः पुत्र प्रसव कारकः।
प्रमेहान् विंशतिञ्चैव क्षयमेकादशं तथा॥
तथा सोमरूजं हन्ति साध्यासाध्यामथापि वा॥

(र.सा.सं.रसा 831/2-85)

Twenty types of Prameha, Kanti Kamada Pushtikara, Vali Paliata, Smruti Bhrama, Balya, Ayushyakara, Putra Prasavakaraka, Kshaya, Soma Roga, Karshya.

Matra- 125- 250mg

Anupana- Madhu, Goghruta, Dugdha

Pathyapathya- According to diseases condition

Sevana Kala- Twice daily

Research updates and clinical evidences

- Toxicity study done on Vasant Kusumakar Rasa for a duration of 90 days in which drug was given to albino rats once daily orally in a dose of 30 mg/kg, 60 mg/kg and 120 mg/kg body wt. along with 30% honey and in recovery growing (30% honey) (10 ml/kg 6.wt), 120 mg/kg body wt. Vasant Kusamakar Rasa in the doses administered for 90 days does not cause significant toxicity in rats. Reference -Evidence Based Safety of Ayurvedic Herbo-mineral formulations CCRAS under GTP.
- Comparative open randomized clinical study done in the patients of diabetes to evaluate its Upadrava where 40 patients were selected and divided into, 2 groups. Group A patients were given Vasant Kusumar Ras (125 mg Bd) while group B received standard conventional treatment as suggested by neurologist. Duration of study was 12 weeks. Patients in group A showed excellent improvement in all the symptoms. Reference -Shukla Archana Subodh : A clinical study of Prameha Upadrava with special reference to the Role of Vasant Kusumakar Rasa in Diabetic Neuropathy. International Ayurvedic Medical Journal; 2017.

Vasanta Malti Rasa
A.F.I. - I, Rasayoga, 20:41, Si.Bhai.Ma.Ma. Jwara 4/60-62

स्वर्ण मुक्ता च दरदं मरिचं भागवृद्धितः।
खर्पर्यष्टौ कलांशं स्यान्नवनीतं पयोभवम्॥
निम्बूकैर्मर्दयेत्तावद्यावत् स्नेहो लयं व्रजेत्।

मालती प्राग्वसन्तोऽयं रसो धातुज्वरं जयेत्॥
मात्रा गुञ्जाद्वयोन्माना कणा मधु चमत्कृता।
प्रकुञ्चपञ्चके पञ्चनवतिनिम्बुकान्यलम्॥
(सिद्ध भे.म.मा.ज्वर 60-62)

Ingredients

- Swarna Bhasma- 1 part
- Mukta Bhasma- 2 parts
- Shuddha Hingula- 3 parts
- Maricha- 4 parts
- Karpara Bhasma- 8 parts
- Navanita (butter)- 16 parts
- Nimbuka Swarasa- Quantity Sufficient

Method of Preparation

Collect all the ingredients and triturate each ingredients in Khalva Yantra. Add 16 part of Navanita and triturate properly. Add quantity sufficient of Nimbuka Swarasa and mix well. Shape the mixture into pills, dry the pills in shade and store in airtight container.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	स्वर्ण	मधुर, तिक्त, कषाय	स्निग्ध	शीत	मधुर
2.	मुक्ता	मधुर	—	शीत	—
3.	हिङ्गुल	कषाय, कटु, तिक्त	—	—	—
4.	यशद	कषाय, कटु	—	शीत	—
5.	मरिच	कटु	लघु, तीक्ष्ण	उष्ण	कटु

चिकित्सकीय गुण (Therapeutic properties)

Jirna Jwara, Vishama jwara, Jirna Kasa and Dhatugata Jwara.

Matra- 1-2 Ratti (125-250mg)

Anupana- Pippali Churna, Madhu

Pathyapathya- According to disease condition

Sevana Kala-Twice daily

Research updates and clinical evidences

Study done on Swarna Vasant Malti Rasa to evaluate its safety and efficacy by DC Sharma et al. in which 20 male persons were given dose of 100 mg twice a day for 40 days. The gold from this preparation was found in plasma and erythrocyte, excreted partly in urine and was present in semen drug does not have any toxic effect on human body as evidenced by clinical examination unaltered body weight, absence of urinary pathology and by thirty sensitive biochemical as well as enzymatic tests. Reference- Sharma DC, Jha J, Sharma P. Gaur BL. Evaluation of safety and efficacy of a gold containing Ayurvedic drug. Indian J Exp Biol. 2001 Sep; 39(9):892-6.

Brihat Vata Chintamani Rasa
A.F.I. - I, Rasayoga, 20:26, B.R., Vatavyadhi 26/ 145-148

भागत्रयं स्वर्णभस्म द्विभागं रौप्यभ्रकम्।
लोहात्पञ्च प्रवालञ्च मौक्तिकं त्रयसम्मितम्॥
भस्मसूतं सप्तकञ्च कन्यारसविमर्दितम्।
वल्लमात्रा वटी कार्या भिषग्भिः परियत्नतः॥
(भै.र.वा. 26/145-146)

Ingredients

- Swarna Bhasma 3 parts
- Rajata Bhasma- 2 parts
- Abhraka Bhasma- 2 parts
- Lauha Bhasma- 5 parts
- Pravala Bhasma 3 parts
- Mukta Bhasma- 3 parts
- Rasa Sindura- 7 parts
- Kumari Swarasa- quantity sufficient

Method of preparation

Take all ingredients in proportion adding the Kumari Swarasa and triturate well, until it become suitable for making tablets or pills, then roll it into tablets and store in airtight container.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	स्वर्ण	मधुर, तिक्त, कषाय	स्निग्ध	शीत	मधुर
2.	रजत	कषाय, अम्ल	स्निग्ध, सर	शीत	मधुर
3.	लोह	तिक्त, कषाय	रूक्ष, गुरू	शीत	मधुर
4.	प्रवाल	मधुर, क्षार	लघु, शीत	—	—
5.	मुक्ता	मधुर	—	शीत	—
6.	रस सिन्दूर	—	—	—	—

चिकित्सकीय गुण (Therapeutic properties)

यथाव्याध्यानुपानेन नाशयेद्रोगसंकुलम् ।
वातरोगं पित्तकृतं निहन्ति नात्र चिन्तनम् ॥
वृद्धोऽपि तरूणस्पर्द्धी कन्दर्प समविक्रयः ।
दृष्टः सिद्ध फलश्चापं वातचिन्तामणिस्त्विह ॥

(भै.र.वात. 26/147-148)

Vata Pittaja Roga, Brama, Pralapa.

Matra- 125 mg

Anupana- Guduchi Swarasa, Ajakshira, Brahmi Swrasa, Tambula Swarasa, Shankhapusphi Swarasa and Madhu.

Pathyapathya-According to disease condition.

Sevana Kala- Twice daily

Research updates and clinical evidences

- Animal study done on Brihat Vata Chintamani Rasa shows that test drug administration significantly elevated catalase and considerable decrease in the lipid peroxidation in comparison to control group. Histopathological examination revealed decreased cellularity and predominance of immature neurous in the granular layer was observed in hypothalamus in contol rats while the test drug has shown normal cytoarchitecture suggesting its storing antioxidant and retained normal cellular integrity of different brain regions. Reference- Goshan V, Mundugaru R. Prakash N, Bhat S, Basavaiah R. Evaluation of neuroprotective activity of Birhatvata chintamani rasa. The Journal of Phytopharmacology 2015; 4(4):207-211.
- Clinical study done on Brihat Vata Chintamani rasa in the management of Pakshaghata where 40 patients were divided into two groups. Group A recieved Brihat Vata Chintamani Rasa with external application of Gandha Prasarini Taila for 28 days and in Group B Gagandi vati with Gandha Prasarini Taila was given. Group A patients attained maximum beneficial result in the patients compared to treatment given in Group B. Reference- Mohan Vinay G, Dhamannavar G, Mathapathi IS. Dharya. Hiremath M. Assessment of the efficacy of Brihat Vata Chintamani Rasa and Gaganadi vati with Gandhaprasarini Taila in the management of Pakshaghata with special reference to Hemiplegia comparative clinical study. JETIR; 2024 1(11):379-384.

Shankha Vati
A.F.I. - I, Vati Gutika, 12:32, B.R. Agnimandya 10/182

चिञ्चाक्षारपलं पटुपंचपलं निम्बूरसे कल्कितम् ।
तस्मिन् शङ्खपलं प्रतप्तमसकृत संस्थाप्य शीर्णावधि ॥
हिङ्गुव्योषपलं रसामृतवली निक्षिप्य निष्कांशिका ।
बद्ध्वा शङ्खवटी क्षयग्रहणिकारूकपक्तिशूलादिषु ॥

(भै.र. अग्नि. 10/182-83)

Ingredients

- Chincha Kshara- 4 parts
- Pancha Lavana- 4 parts
- Nimbu Swarasa- quantity sufficient
- Shanka Bhasma- 4 parts
- Hingu 4 parts
- Shunthi- 4 parts
- Maricha- 4 parts
- Pippali- 4 parts
- Shuddha Parada- $^1/_4$ part
- Shuddha Vatsanabha- $^1/_4$ part
- Shuddha Gandhala- $^1/_4$ part

Method of preparation

First prepare Kajjali by triturating Shuddha Parada and Shuddha Gandhaka in Khalva Yantra. Add the rest of the ingredients and grind well, making tablet then roll it into tablets. Shape the mixture into pills. Dry the pills and store in airtight container.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	हिङ्गु	कटु	लघु, स्निग्ध, तीक्ष्ण	उष्ण	कटु
2.	शुण्ठी	कटु	रूक्ष, तीक्ष्ण, गुरू	उष्ण	कटु
3.	मरिच	कटु	लघु, तीक्ष्ण	उष्ण	कटु
4.	पिप्पली	कटु	लघु, स्निग्ध, तीक्ष्ण	उष्ण	मधुर
5.	निम्बू (मातुलुंग)	अम्ल	लघु, तीक्ष्ण	उष्ण	अम्ल
6.	शंख	क्षार	शीत, ग्राही	—	—
7.	सैन्धव लवण	लवण	स्निग्ध	नोष्ण	—
8.	सौवर्चल लवण	लवण, मधुर	लघु, स्निग्ध, विशाद	उष्ण	—
9.	सामुद्र लवण	लवण, सतिक्त, समधुर	स्निग्ध	—	मधुर
10.	विड लवण	क्षारयुक्त	तीक्ष्ण	नोष्ण	—
11.	रोमक लवण	लवण	उष्ण, लघु, तीक्ष्ण	—	कटु

चिकित्सकीय गुण (Therapeutic properties)

Agnimandya, Grahani, Aruchi, Paktishula and Kshaya.

Matra- 250 mg and 500 mg

Anupana-Madhu, Warma water, Takra

Pathyapathya- Pittaja Ahara Vihara Apathya.

Sevana Kala- Morning time

Research updates and clinical evidences

Toxicity study done on Shankha Vati revealed that there were no toxicity related changes found in the animal treated with classical Shankha vati in both acute as well as chronic toxicity study. Biochemical and haematological investigation also did not show toxicity related changes. Reference- Kodlady N. Patgiri BJ, Ravishankar B; From the proceedings of Insight Ayurveda 2013, coimbatore. Toxicity studies on Shankha vati. Anc Sci life. 2013 Jan; 32 (Suppl 2) : S57.

Shwaskuthara Rasa
A.F.I. - I, Rasayoga, 20:49,Yo.Ra., Shwasa / Page 373

रसो गन्धो विषं चैव टङ्कणं च मनःशिला।
एतानि टङ्कमात्राणि मरिचं चाष्टटङ्ककम्॥
एकैकं मरिचं दत्वा खल्वे सूक्ष्मं विमर्दयेत्।
त्रिकटु टङ्कमात्रं च दत्वा पश्चाद्वि चूर्णयेत्॥
सर्वमेकत्र संयोज्य काच कूप्यां विनिक्षिपेत्॥

(योग.र.श्वास पेज 373)

Ingredients

- Shuddha Rasa- 1 part
- Shuddha Gandhaka- 1part
- Shuddha Vatsanabha- 1part
- Shuddha Tankana- 1 part
- Shuddha Manashila- 1 part
- Maricha- 9 parts
- Shunthi- 1 part
- Pippali- 1 part

Method of preparation

Collect all the ingredients, first prepare Kajjali by triturating Shuddha Parada and Shuddha Gandhaka in Khalva Yantra. Add rest ingredients and grind well, expose the sunlight for drying, store in airtight container.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	मनःशिला	कटु, तिक्त	—	—	—
2.	वत्सनाभ	मधुर, कटु, तिक्त, कषाय	—	उष्ण	कटु
3.	शुण्ठी	कटु	रूक्ष, तीक्ष्ण, गुरू	उष्ण	कटु
4.	मरिच	कटु	लघु, तीक्ष्ण	उष्ण	कटु
5.	पिप्पली	कटु	लघु, तीक्ष्ण, स्निग्ध	उष्ण	मधुर
6.	टंकण	कटु	तीक्ष्ण, उष्ण, सर	—	—

चिकित्सकीय गुण (Therapeutic properties)

कासे श्वासे च मन्दाग्नौ वातश्लेष्मामथेषु च।
गुञ्जामात्रं प्रदातव्यं पर्णखण्डेन धीमता।
सन्निपाते च मूर्च्छायामपस्मारे तथा पुनः॥
अतिमोहत्वमापन्ने नस्यं दत्त्वा विचक्षणः।
रसःश्वास कुठारोऽयं सर्वश्वास विकारहा॥
(यो.र.श्वास 373 (3-5)

It is indicated in Agnimandya, Kasa, Shwasa, Vatakaphaja Roga, Sannipataja Roga, Murccha, Apasmara, Prameha.

Matra - 125- 250mg

Anupana - Madhu, Adraka Swarasa, Tabula Swarasa

Pathyapathya - According to disease condition.

Sevana Kala - In Ayurveda Sara Sangraha mention for Muhurmuhu means every 4 hourly.

Ashuddha Apakwa processed, Avidhi Sevanajanya Vyadhi and their Shantyupaya

मनःशिलामदंबलंकरोतिजतून्धुवंशोधनमंतरेण ।
मलस्यवंधंकिलमूत्ररोगंसशर्करंकृच्छ्रगदंचकुर्यात् ॥
(र.र.सु. पेज 150)

Ashudhha Manashila causes Balanasha, Malabandha, Mutraroga, Sharkara, Kruccha and Krimiroga.

Shanti Upaya

गोक्षीरमांक्षिकयुतं पिवेतेयोदिनत्रयं।
कुनटीतस्यदेहे च विकारननेकरोतिहि॥
(र.र.सु. पेज 150)

Godugdha and Madhu for 3 days is indicated in Manashila Janya Vikara.

Research updates and clinical evidences

- Study done on characterization of Shwasa Kuthar Rasa shows that it is nanocrytallite with submicron size particle. This formulation contains elements like C, S, N, O, Na, Ca, Cl, Hg, As. Reference- Janadri S, Mishra AP, Kumar R, Shanmukh I, ReON, Kharya M. Preparation and characterization of mercury-based traditional herbo mineral formulation : Shwasa Kuthar Rasa. J Ayurveda Integr Med. 2015 Oct-Dec; 6(4):268-72.
- Clinical study done on Shwasa Kuuthar Rasa in the management of Tamaka Shwasa where 10 patients having Tamaka Shwasa were treated with Shwarna Kuthar Rasa in a dose of 125 mg q.i.d. for 30 days. Aaradraka Swarasa was used as Anupana. Relief in the symptoms of disease it was concluded that the drug has effective role in the management of Tamaka Shwasa. Reference- Mishra M, Ninama R. Therapeutic Role of Shwasa Kuthara Rasa in the management of Tamaka Shwasa (Bronchial Asthma) : A Single group randomized clinical Trial. IJHSR.11(12) Dec 2021; 91-95.

Kamadudha Rasa
A.F.I. - II, Rasayoga, 16:9
R.Ta.Sa. Kharaliya Rasayana / 80

मौक्तिस्य प्रवालस्य मुक्ताशुक्तिभवस्य च।
वराटिकायाः शङ्खस्य भस्मानि गैरिकं तथा॥
गुडूचिकोद्भयं सत्त्वं समभागानि कारयेत्।

अजाजिकासिताभ्याञ्च गृह्णीयादिक्तकाद्वयम् ॥
(Rasayogasagara, 157, Ist Part, p. 260; Aushadhaguna Dharma Shastra, 20)

Ingredients

- Mukta Pishti- 1 part
- Pravala Pishti- 1part
- Shukti Bhasma- 1 part
- Karpadika Bhasma- 1 part
- Shanka Bhasma- 1 part
- Shuddha Swarna Gairika- 1 part
- Guduchi Sattva 1 part

Method of preparation

Collect all the ingredients, mix all ingredients triturating with Guduchi Sattva in Khalva Yantra. Add rest ingredients and grind well, expose the sunlight for drying, store in airtight container.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	मुक्ता	मधुर	—	शीत	—
2.	प्रवाल	मधुर, क्षार	लघु, शीत	—	—
3.	मुक्ताशुक्ति	मधुर	स्निग्ध	—	—
4.	कपर्दिका	—	उष्ण	—	—
5.	शंख	क्षार	शीत, ग्राही	—	—
6.	स्वर्ण, गैरिक	मधुर, कषाय	स्निग्ध	शीत	—
7.	गुडुची	तिक्त, कषाय	गुरू, स्निग्ध	उष्ण	कटु

चिकित्सकीय गुण (Therapeutic properties)

जीर्णज्वरभ्रमोन्मादपित्तरोगेषु शस्यते ।
अम्लपित्ते सोमरोगे योज्यः कामदुधारसः ॥
(Rasayogasagara, 157, Ist Part, p. 260; Aushadhaguna Dharma Shastra, 20)

Kamadudha Rasa indicated in Jirna Jwara, Bhrama, Unmada, Pitta Roga, Amlapitta and Somaroga.

Matra-125-250 mg

Anupana- Sita, Jiraka, Amalaki Churna, Ghruta

Pathyapathya- Pitta Prakopa Ahara should be avoid.

Sevana Kala- Twice daily before food.

Research updates and clinical evidences

- Study of Kamdudha Rasa to evaluate its effectiveness in Urdhwaga, Amalpitta shows that it effectively cures patients within 28 days. Single arm exploratory open label clinical study was days. Single arm exploratory open label clinical study was done following the central limit theorem and Browne's with sample size of 30. Duration of study was 4 weeks.

  Reference- Meenakshi K. Vineteshwari N, Minaxi J, Vartika S. Effectiveness of Ayurveda treatment in Urdhwaga Amalpitta: A clinical evaluation. J. Ayurveda Integr Med. 2021 Jan-Mar; 12(1):87-92.

- Kamadudha rasa is a Sudhavargiya Kharaliya Rasayana which is commonly given in pittaja disorders. It is given with proper adjuvant in various disorders gives relief to the patients. Patients of Pittaja disorders like Amlapitta, Parinama Shoola, Annadrava Shoola, Urodaha, Udaradaha, Mootra Daha, Gudadaha, Pittaja Bhrama, Nidranasha, etc. it gives good results. Because of its ingredients which are mostly containing calcium, are having Madhura Kashaya Rasa, Snigdha Sheeta Guna and Sheeta Virya pacifies Pitta Dosha. There are east side effects even on prolonged usage of this formulation. Kamadugha rasa is a calcium containing formulation useful in Pittaja disorders. Even after prolonged usage, it will not produce any serious adverse drug reactions. In some cases it produces rhinorrhoea, cold, cough and expectoration and dyspnoea after its prolonged usage. It is contraindicated in Renal calculus patients.

  Reference- Shripathi AG, Acharya MR. Clinical Indications of Kamadudha Rasa A

Scientific And Experiential Review. International Research Journal of Ayurveda and Yoga. 2020;3(12):142-8.

Sutashekhar Rasa
A.F.I. - II, Rasayoga, 16:63, Yo.Ra. Amlapitta Page 125

शुद्ध सूतं मृतं स्वर्णं टङ्कणं वत्सनाभकम्।
व्योषमुन्मत्त बीजं च गन्धकं ताम्रभस्कम्॥
चतुर्जातं शङ्खभस्म बिल्वमज्जा कचोरकम्।
सर्व समं क्षिपेत्खल्वे मर्द्यं भृङ्गरसैर्दिनम्॥
(योग.र.अम्लपित्त 705)

Ingredients

- Shuddha Parada- 1 part
- Swarna Bhasma- 1part
- Shuddha Tankana- 1 part
- Shuddha Vatsanabha- 1 part
- Shunthi- 1part
- Maricha- 1part
- Pippali - 1 part
- Shuddha Dhattura- 1 part
- Shuddha Gandhaka- 1 part
- Tamra Bhasma- 1 part
- Ela - 1 part
- Twaka- 1 part
- Patra- 1 part
- Nagakeshara- 1 part
- Shankha Bhasma- 1 part
- Bilva Bhasma- 1part
- Karchura- 1 part
- Bhringaraja Swarasa- quantity sufficient

Method of preparation

Collect all the ingredients of preparation, first prepare Pishti by triturating Shuddha Parada and Swarna Bhasma in Khalava Yantra. Add the rest of ingredients and grind well with mixing Bhringaraja Swarasa and until it becomes suitable to making tablets. Dry the pills in the shade and preserve the dried pills in airtight container.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	स्वर्ण	मधुर, तिक्त, कषाय	स्निग्ध	शीत	मधुर
2.	टंकण	कटु	तीक्ष्ण, उष्ण, सर	—	—
3.	शंख	क्षार	शीत, ग्राही	—	—
4.	ताम्र	तिक्त, कषाय, मधुर	स्निग्ध लेखन	उष्ण	कटु
5.	शुण्ठी	कटु	गुरु, तीक्ष्ण, रूक्ष	उष्ण	मधुर
6	मरिच	कटु	लघु, तीक्ष्ण	उष्ण	कटु
7.	पिप्पली	कटु	लघु, स्निग्ध, तीक्ष्ण	उष्ण	मधुर
8.	धतूर बीज	तिक्त, कटु	लघु, रूक्ष	उष्ण	कटु
9.	त्वक्	कटु, तिक्त, मधुर	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
10.	पत्र	कटु, मधुर	लघु, तीक्ष्ण	उष्ण	कटु
11.	एला	कटु, मधुर	लघु, रूक्ष	शीत	कटु
12.	नागकेशर	कषाय, तिक्त	लघु, रूक्ष	उष्ण	कटु
13.	बिल्व मज्जा	कषाय, तिक्त	लघु, रूक्ष	उष्ण	कटु
14.	कर्चूर	कटु, तिक्त, कषाय	लघु, तीक्ष्ण	उष्ण	कटु
15.	भृंगराज स्वरस	कटु, तिक्त	रूक्ष, लघु	उष्ण	कटु

चिकित्सकीय गुण (Therapeutic properties)

गुञ्जामात्रां वटीं कृत्वा द्विगुञ्जे मधुसर्पिषी ।
भक्षयेदम्लपित्तघ्नो वान्तिशूलभयापहः ॥
पञ्चगुल्मान्पञ्च कासान्ग्रह्यामयनाशनः ।
त्रिदोषोत्थतिसारघ्नः श्वासमन्दाग्निनाशनः ॥
उग्रहिक्कामुदावर्तं देहयाप्यगदापहः ।
मण्डलान्नात्र सन्देहः सर्वरोगहरः परः ॥
राजयक्ष्महरः साक्षाद्रसोऽयं सूतशेखरः ॥

(योग.र.अम्लपित्त पेज 705)

Indication

Amlapitta, Chardi, Pancha Gulma, Kasa, Grahani, Tridoshaja Atisara, Shula, Shwasa, Mandagni, Hikka, Udavarta and Rajayakshma.

Matra- 125- 250 mg

Anupana- Ghruta and Madhu

Pathyapathya- Acc. to disease condition

Sevana Kala- Two to three times daily

Kala Maryada- 1 Mandala

Research updates and clinical evidences

The disease Amlapitta is a frequent presentation in clinical practice. Excess formation of vitiated pitta (Pitta Drava guna vridhi) due improper dietary and lifestyle habits is thought to be the main pathological mechanism behind manifestation of this disease. Classical Ayurvedic formulations like Avipattikar choorna and sutasekhar Rasa are often prescribed in combination for its effective management. The present study was conducted to evaluate the efficacy of both these classical formulation in the management of urdhwaga Amlapitta. The study was a single arm, open clinical trial involving 133 patients of Amlapitta attending the OPD of All India Institute of Ayurveda, New Delhi, India. All patients were screened on the basis of classical clinical findings of Amlapitta and were administered with a combination of sutasekhar rasa (125 mg twice a day orally after principal meals) and Avipattikar choorna (5 g twice a day orally after principal meals) for 04 weeks period. Scoring scale based on classical clinical features of Amlapitta was adopted for the assessment of the disease. Routine pathological tests such as blood, urine, stool, etc. were carried out. During the study, 20 patients dropped out and 113 patients were followed. After 04 weeks of treatment, Improvement in clinical features like Hrit-Kantha Daha, Tikta-Amla Udgaar, Aruchi, Utklesha, Avipaak, Gurutaa and Klama was found to be statistical significant (p=0.05). No adverse event was observed during the administration of trial drugs. Reference - Chauhan G, Mahapatra A. Kapoor A. Kumar A. Study on Clinical Efficacy of Avipattikar choorna and Sutasekhar Rasa in the management of Urdhwaga Amalpitta. JPSI;4(1), Jan-feb 2015, 11-15.

Navayasa Loha
A.F.I. - II, Lauha, 17:2
Cha.Sa.Chi.16/70

त्र्यूषणत्रिफलामुस्तविडङ्गदहनाः समाः ।
नवायो रजसो भागास्तच्चूर्णं मधुसर्पिषा ॥
भक्षयोत्पाण्डुहृदरोग कुण्ठार्शः कामलापहम् ।
नवायसमिदं चूर्णं कृष्णात्रेयेण भाषितम् ॥

(च.चि. 16/70-71)

Ingredients

- Shunthi- 1 part
- Maricha- 1 part
- Pippali - 1 part
- Haritaki- 1 part
- Bibhitaki - 1 part
- Amalaki- 1 part
- Musta- 1 part
- Vidanga - 1 part
- Chitraka- 1 part
- Laiha Bhasma - 9 parts

Method of preparation

Each ingredient is powdered and weighed separately and then mixed together in specified quantity to obtain a homogeneous mixture. It is packed in a tightly closed container.

Chemical/phytochemical composition- Fe_3O_4/Fe_2O_3

Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	लौह	तिक्त, कषाय	गुरू, रूक्ष	शीत	मधुर
2.	हरीतकी	पंचरस, लवण वर्ज्य	रूक्ष, लघु	उष्ण	मधुर
3.	विभीतकी	कषाय	रूक्ष, लघु	उष्ण	मधुर
4.	आमलकी	पंचरस, लवण वर्ज्य	गुरु, रूक्ष, शीत	शीत	मधुर
5.	शुण्ठी	कटु	गुरु, स्निग्ध	उष्ण	मधुर
6	मरिच	कटु	लघु, तीक्ष्ण	उष्ण	कटु
7.	पिप्पली	कटु	लघु, स्निग्ध, तीक्ष्ण	उष्ण	मधुर
8.	मुस्ता	कटु, तिक्त, कषाय	लघु, रूक्ष	शीत	कटु
9.	चित्रक	कटु	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु

चिकित्सकीय गुण (Therapeutic properties)

Indicated in Pandu Roga, Hrudya Roga, Kushtahara, Arsha and Kamalahara.

Probable mode of actions

Ascorbic acid, tannin and gallic acid are mainly present in Triphala. Ascorbic acid, by converting Fe3+ to Fe2+, increases the bioavailability of iron while phenolics can reduce the iron by binding to it. Triphala due to its Sare property helps in the too much absorption of iron and also removes the constipating property of iron. Pippali know as bioavailability enhancer. Study also suggests that Triphala has property of inhibiting drug metabolizing enzymes.

Matra- 250 mg

Anupana- Madhu and Ghruta

Pathyapathya- Apathya- Pittaja Ahara Vihara

Sevana Kala-Twice daily

Research updates and clinical evidences

- A marked reduction is observed in the total severity of the illness in both the groups with better effect in group A when compared to group B. Observing the clinical efficacy of Eranda Beeja Payasa and Lashuna Ksheera along with Matra Basti. None of the patients developed any untoward symptoms during the course which indicates the safety of both the procedures. Only 4 patients with Pitta Prakruti had the gastritis complaints in summer for Lashuna Ksheera after 10 days of Pana. Only 2 patients had loose stools and abdomen pain after 3 days of Eranda Beeja Payasa Pana. Elderly patients with Vataja Gridrasi symptoms and Dhatu Kshayajanya Gridrasi responded very well for Eranda Beeja Payasa and showed relief of symptoms Ruk, Toda and Suptata where as young and middle aged patients with Vatakaphaja Gridasi symptoms responded very well for Lashuna Ksheera and showed relief of symptoms like Stambha and Ruk. Reference- Kale NS, Rao MS, Mohan GV, Girish D, Rudrapuri MB. A comparative clinical study of Mustadi Churna and Navayas Loha in the management of Pandu Roga. Journal of Ayurveda and Integrated Medical Sciences. 2019 Oct 31;4(05):67-71.
- In this study, NL was found to be effective in correction of laboratory findings of iron deficiency anemia caused due to nutritional deficiency. Objective parameters including Hb%, RBC, HCT, MCV, MCHC, TIBC, and serum iron were significantly altered in experimental animals. As no adverse drug reaction has been reported in this study, it may

be used as Iron supplement therapy in case of iron deficiency anemia. Reference- Joshi N, Dash MK, Dwivedi L, Khilnani G. Effect of Navayasa Lauha, an Ayurvedic Herbomineral Formulation on Experimentally-Induced Iron Deficiency Anemia. Ancient Science of Life. 2018 Apr 1;37(4):180-7.

- Comparative clinical study was done on Navayasa Churna and Nisha Churna in the management of Pandu done on 80 patients (Navayasa churna to 33 patients while Nisha Lauha to 32 patients), After the study it was concluded that Navayasa Churna has better result than Nisha Lauha. Reference- Hetal D vyas and Alankruta R Dave (2022):A comparative study of Navayasa churna and Nisha Lauha in the management of Pandu w.s.r. to Iron Deficiency Anaemia. Int J of Adv Res 10 (Jul) 169-177.

Ichchhabhedi Rasa
A.F.I. - I, Rasayoga, 20:5,B.Ra. Udararoga / 84

शुण्ठी मरिच संयुक्तं रसगन्धकटङ्कणम्।
जैपालास्त्रिगुणाः प्रोक्ताः सर्वमेकत्र पेषयेत्॥
इच्छा भेदी द्विगुञ्जः स्यासितया सह पाययेत्।
यावन्तश्शुल्लुकाः पीतास्तावद्वेगाद् विरेचयेत्॥
तक्रौदनञ्च दातव्यभिच्छभेदी यथेच्छया॥

(भै.र.उदर. 84-85)

Ingredients

- Shunthi - 1 part
- Maricha - 1 part
- Shuddha Parada- 1 part
- Shuddha Gandhaka - 1 part
- Shuddha Tankana - 1 part
- Shuddha Jayaphala- 3 parts

Method of preparation

Prepare the Kajjali of Shuddha Parada and Shuddha Gandhaka first by triturating in Khalva Yantra. Add rest of the ingredients by triturating in Khalva Yantra. Prepare it's pills of two Ratti (250 mg.) by weight each uniformly and dry them in shade. On drying, these pills should be stored in glass bottles. This preparation is known as Icchabhedi Rasa.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	शुण्ठी	कटु	गुरु, रूक्ष, तीक्ष्ण	उष्ण	मधुर
2.	मरिच	कटु	लघु, तीक्ष्ण	उष्ण	[illegible]
3.	जयपाल	कटु	गुरू, रूक्ष, तीक्ष्ण	उष्ण	[illegible]

चिकित्सकीय गुण (Therapeutic properties)

Anaha and Udara Roga for Virechana.

Matra- 250 mg

Anupana- Cold water and sugar

Pathyapathya- Takra and Shali is Pathya

Sevana Kala- Morning

Kala Maryada- Depended on Virechana Vega

Research updates and clinical evidences

- Average weight gain in Ichhabhedi Rasa after Vati preparation was 2.16%. Value for standard Ichhabhedi Rasa for parameters such as Ash value, Acid insoluble ash, Alcohol soluble extractive, Water soluble extractive, Loss on drying, pH, Hardness, Uniformity of weight, Dissolution time and Disintegration time was 42.34 w/w, 7.33 w/w, 13.47 w/v, 23.78 w/v, 3.95%, 8.14, 1.23 kg/cm^2, 128.006 mg, 15 min and 20.66 min respectively. Similar work on large scale preparation of Ichhabhedi Rasa is needed to establish these findings. Reference- Mehkarkar, Darshana; Rathi, Bharat1; Rajput, Dhirajsingh2; Wanjari, Anita3; Khan, Mujahid4. Pharmaceutical Standardization of Ichhabhedi Rasa- An Ayurvedic Formulation. Journal of Indian System of Medicine 6(1):p 10-13, JanMar 2018.
- The pharmacological action of Icchabhedi Rasa was investigated from three aspects: gastrointestinal effect/side effect, analgesic and

/or anti-inflammatory effect, and neuropharmacological effect/side effect. The results obtained after scrupulous statistical analysis show that ICB increases gastric peristalsis significantly in gastrointestinal motility test in 2nd hour 15 minutes study. Therefore, ICB may have purgative property and this finding also lends pharmacological support to its folkloric use in the treatment of constipation. Reference- Ferdousi MI. Pharmacological Evaluation of an Ayurvedic Preparation, Icchabhedi Rasa (Doctoral dissertation, East West University).

Krimikuthara Rasa
A.F.I. - II, Rasayoga, 16:12, R.Ta.Sa. Kharaliya Rasayana P. 103

कर्पूरश्चाष्टभागश्च कुटजश्चैकभागिकः ।
तत्समानं त्रायमाणमजमोदा विडङ्गकम् ॥
हिङ्गुलं विषभागश्च तत्समानं च केसरम् ।
सर्वं दृढं च सम्मर्छ्य भृङ्गराजरसैस्तथा ॥
पलाशबीजसम्मिश्रमुन्दुरीरसभावितम् ।
ब्राह्मीरसं ततो दत्त्वासिध्येत्कृमिकुठारकः ॥
वल्लमात्रां वटीं कुर्याद्दद्याद्धेमसमन्विताम् ।
कुर्यात्कृमिथिनाशश्च सर्वशः सप्तभिर्दिनैः ॥
(Rasayogasagara, Ist Part, 322, p. 328)

Ingredients

- Karpura- 8 Parts
- Indrayava- 1 part
- Trayamana- 1 part
- Vidanga- 1 part
- Ajamoda- 1 part
- Shuddha Hingula- 1 part
- Shuddha Vatsnabha - 1 part
- Nagakeshara- 1part
- Vijaya Swarasa- quantity sufficient
- Palasha Beeja Churna - 12 parts
- Mushakarni - quantity sufficient
- Brahmi Swarasa- quantity sufficient

Method of preparation

Take all the required dried ingredients, using Khalva Yantra mixed all the drugs adding Vijaya Swarasa, Palasha Beeja Churna triturate properly. Add Musakarni and Brahmi Swarasa, then triturate well until the mixture become suitable for making tablets. Roll it into pills kept in airtight container.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	कर्पूर	तिक्त, कटु, मधुर	लघु, रूक्ष	शीत	कटु
2.	कुटज	तिक्त, कषाय	लघु, रूक्ष	शीत	कटु
3.	त्रायमाणा	तिक्त	लघु, रूक्ष	उष्ण	कटु
4.	अजमोदा	तिक्त, कटु	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
5.	विडङ्ग	कटु, कषाय	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
6.	वत्सनाभ	कषाय, तिक्त, मधुर	लघु, रूक्ष, तीक्ष्ण	उष्ण	मधुर
7.	नागकेसर	तिक्त, कषाय	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
8.	विजया	तिक्त	लघु, तीक्ष्ण	उष्ण	कटु
9.	पलाश	कटु, तिक्त, कषाय	लघु, स्निग्ध	उष्ण	कटु
10.	मूसाकर्णी	कटु, तिक्त	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
11.	ब्राह्मी	तिक्त, कषाय	लघु	शीत	मधुर
12.	हिङ्गुल	कटु, तिक्त, कषाय	—	—	–

चिकित्सकीय गुण (Therapeutic properties)

Krimi Roga Nashaka.

Matra- 125-375 mg

Anupana-Swarna Kshira Mula, Madhu

Pathyapathya-

प्रत्यहं कटुकं तिक्तं भोजनं कफनाशनम्।
कृमीणां नाशनं रूच्यमानिसन्दीपनं परम्॥
(भै.र. कृमि/89)

Katu, Tikta Rasa, Kapha Nashaka Dravya, Agni Dipaka Dravya.

Sevana Kala- Twice daily

Research updates and clinical evidences

Dadru, is one of the Kushtha, it is a common skin disease which clinically simulates with Deramatophytosis. As it is a contagious disease, so maintaining personal hygiene is very important. The present case study concludes that Krumihar chikitsa also plays important role in case of Dadru Kushtha. Ayurvedic medicines like Vidangarishta, Krumikuthar rasa, Hemocleen Syrup and Virechana is highly effective in management of Dadru Kushtha. Reference- Ade VN, Mundhe SS. www. ijrap. net.

Parpati Rasayana

Introduction

The Sanskrit word "Parpati" denotes a thin flake like preparation. "Parpati" indicates a preparation which is thin, brittle and has a shape of thin Papad.

In the Rasendra Mangal written by Acharya Nagarjuna there is preparation of Parpati by using the ingredients Parada, Gandhaka, Tamra and Visha. It is used in Kushtha Roga. But the period of this classic is not fixed otherwise we can say that use of Parpati begins in eight century A.D. In the eleventh centaury A.D. Classic namely Chakradatta written by Aacharya Chakrapani Rasa Parpati is used in the treatment of Grahani.

रस पर्पटिका ख्याता निबद्धा चक्रपाणिना।
(Chakra. Grahani Chiki.)

श्रीवत्साङ्क विनिर्मितसम्यक् रसपर्पटिका श्रेष्ठा।
(B.R. Grahani 4/2)

It is quoted in other classics like Vangasen, Rasa Ratna Samuchchaya, Rasendar Sara Sangrah etc. Bhaishajya Ratnavali has said that it is prepared by Aacharya Vatsnak. viz.

Definition

सन्द्राविता कज्जलिकाग्नि योगात्।
रम्भापलाशे चिपटी कृता च।
रसागमज्ञैः खलु पर्पटी सा, प्रकीर्तिता पर्पटिका च सैव॥
(R.T. 2/42)

द्रुत कज्जलिका मोचापत्रे चिपटीकृता च।
स पोटः पर्पटी सैव बालाद्यखिलरोगनुत्॥
(R.R.S. 11/72)

Kajjali is melted on fire and it is dropped on Banana leaf and made into flatten then flake form (Papad) then it is termed as Parpati or Parpatika by the scholars of Rasa Shastra. Parpati is Pota Bandha of Parada and is capable of mitigating all the diseases of Bala etc.

Types

On the basis of presence or absence of Gandhaka Parpati can be of two types.

1. Sagandha Parpati
2. Nirgandha Parpati

1. Sagandha Parpati

In these types of Parpati Parada and Gandhaka are present. Besides these two other ingredients may be present. According to specific Dravya like Tamra, Svarna etc. these are named. For the preparation first we have to made Kajjali and then Bhasmas are added.

a) When only Parada and Gandhaka present Rasa Parpati
b) Parada + Gandhaka + Tamra + Vatsnabha Tamra Parpati
c) Parada + Gandhaka + Svarna Svarna Parpati

d) Parada + Gandhaka + Lauha Lauha Parpati
e) Parada + Gandhaka + Abhraka (Gagan) Gagan Parpati
f) Parada + Gandhaka + Lauha + Abhraka + Tamra Panchamrita Parpati
g) Parada + Gandhaka + Bola Churna - Bola Parpati

2. Nirgandha Parpati

a) Suryakshara + Sphatika + Nausadar Sweta Parpati
b) Malla Parpati

Procedure

निर्धूमबदर काष्ठाङ्गारे न्यस्तं विलाप्य तैलसमम।
(B.R. Grahani chi. 384)

ततो बादरबह्निस्थं लोहपात्रे द्रवीकृतम्
(Chakra. Grahani. 87)

Kajjali melt on temperature 119-1200C so this temperature range is needed for Parpati preparation. If temperature is higher than this and having flame then there is chance of burning of Kajjali. Badar wood coal are having temperature of this range so this is recommended in classics. Nowa days in small quantity Parpati can be made with LPG burner on sim mode.

Parpati Paka Pariksha

Parpati can be of three types depending upon Paka :

1. Mridu Paka
2. Madhya Paka
3. Khara Paka

Parpati Paka examination can be catagorised under two headings :

1. Paka Kaleen Pariksha (Examination during preparation)
2. Paka Pashchat Pariksha (Examination after preparation)

On the basis of appearance of melted Kajjali the assumption is made that which type of Parpati will be formed. It is as follows

Mridu Paka

मयूर चन्द्रिकाकारं लिङ्गं यत्र तु दृश्यते।
तत्र सिद्धिं विजानीयात मृदुनैवात्र संशयः॥
(Bha. Bhai. Rat. IV part, Rakardi 6063)

If melted Kajjali is having colour similar to Mayurchandra then Mridu Paki Parpati should be formed.

Madhya Paka

तावत् स्थाप्यते यावत्तैलाभो जायते रसः।
(Tamra Parpati, Takardi, Ras. Yog. Sag. II part)

It is Tailabha then prepared Parpati will be Madhya Paki.

Khara Paka

रक्तवर्ण भवेद् यावत् तावत्पाच्यं प्रचालयेत।
(Bha. Bha Ratna. IV part Rakardi 6154)

If melted Kajjali becomes Rakta Varna then formed Parpati will be Khara Paki.

It can be summarised as follows :

Melted Kajjali form/Varna	Paka type
Mayur Chandrika Varna (like peacock feather)	Mridu
Tailabha (oily consistency)	Madhyama
Rakta Varna (Reddish colour)	Khara

Paka Pashchata Pariksha (Examination after preparation)

पाकोऽस्यात्त्रिविधः प्रोक्तो मृदुर्मध्यः खरस्तथा।
आद्ययोर्दृश्यते सूतः खरपाके न दृश्यते॥
मृदौ न सम्यग् भङ्गोऽस्ति मध्ये भङ्गश्च रौप्यवत्।
खरेऽलघुर्भवेद्भङ्गो रुक्षः श्लक्ष्णोऽरुणच्छविः॥
मृदुमध्यौ तथा आद्यौ खरसत्याज्यो विषोपमः॥
(Pancha. Parrpati I, 172-73 Ras. Yog. Sag. II)

मृदुपाके न भगः स्यात्तत्सारल्यञ्च मध्यमे।
द्वयोः सचन्द्रिकं काष्ण्यं खरे चूर्णञ्च लोहितम्॥
(R.T. 6/139)

Paka Pashchata Pariksha can be performed by breaking of Parpati. In the Mridu Paka Parpati does not break but it bends while in Madhya Paka it breaks easily and both of these are black colour

having Chandrika. Khara Paka Parpati is having Rakta Varna and in Churna form. Mridu and Madhya Paka used as medicine.

Panchamruta Parpati
A.F.I. - I, Parpati, 16:1
B.R.Grahani- 461

अष्टौ गन्धतोलका रसदलं लौहं तदर्धं शुभम्।
लौहर्द्धञ्च वराभ्रकं सुविमलं ताम्रं तदभ्रार्द्धिकम्॥
पात्रे लौहमये च मर्दनविधौ चूर्णीकृतञ्चैकतः।
दर्व्या बादरवहिननाति मृदुना पाकं विदित्वा दले॥
रम्भायां लघु ढालयेत् पटुरियं पञ्चामृता पर्पटी।
(भै.र.ग्रहणी 461-4631/2)

Ingredients

- Shuddha Gandhaka - 8 parts
- Shuddha Parada- 4 parts
- Lauha Bhasma- 2 parts
- Abhraka Bhasma- 1 parts
- Tamra Bhasma- $^1/_2$part

Method of preparation

Prepare the Kajjali of Suddha Parada and Shuddha Gandhaka first by triturating in Khalva yantra. Add rest of the ingredients to Kajjali and mixed together thoroughly. Then take this material in a iron ladle inside coated with ghee and melt it on smoke free mild fire of Badari fire wood. Then the molten Kajjali should spread over the banana leaf placed on fixed cow dung platform. Press the molten Kajjali by the bolus of cow dung covered with banana leaf. On self cooling procure the content and powder it nicely. preparation is known as Panchmrita Parpati.

चिकित्सकीय गुण (Therapeutic properties)

नानावर्ण ग्रहण्यामरुचिसमुदये दुष्टदुर्नामकादौ ।
छर्द्यां दीर्घातिसारे ज्वरभरकलिते रक्तपित्तक्षयेऽपि ॥
वृष्याणां वृष्यराज्ञी वलिपलितहरा नेत्ररौगैकहन्त्री ।
तुन्दं दीप्तस्थिराग्नि पुनरपि नवकं रोगिदेहकरोति ॥
(भै.र.ग्र. 465-66)

Pancha Anrita Parpati indicated in Grahani, Arsha, Chardi, Atisara, Jwara, Aruchi, Kshaya, Raktapitta, Vali, Palita, Netra Roga, Agnimandya and Shukra Kshaya.

Matra- 125- 250 mg

Anupana-Madhu and Ghruta

Sevana Kala- Twice daily

Kala Maryada- 21 days three twice

Research updates and clinical evidences

- Crystallogrophy study done on Panchamrita Parpati (Fourth type Rasa Yoga Sagar) shows that it is crystalline and show the presence of Au, Ag and Cu. From this report it is seen that the metal from different compounds is a mixture of substances.

  Reference- Murali Krishna C. Srinivasulu Bandari. Pavan Kumar Sangu. Goli Penchala Prasad. A prospective study on Parpati kalpana wsr to Panchamrut parpati. Int. Journal of Ayu. Med. 2010 1(3):118-1267.
- Single case study done of Panchamrita Parpati show remarkable improvement in the symptoms of Grahani.

  Reference- Jadhava A. Pehekar PP. Patil RS. A clinical study of Rok of Panchamrita parpati is Grahani Vyadhi and Life style principle. The Journal of Oriental Research Madarasa Vol XCIV-VII; 33-44.

Bola Parpati
A.F.I. - I, Parpati, 16:2
Yo.R., Pradara / P 842

सूतगन्धक सुकज्जलिकायाः पर्पटी समयुता समभागम्।
बोलचूर्णविहितं प्रतिवाप्यं स्याद्रसोऽयमसृगामयहारी॥
वल्लयुग्मयुगलं प्रीतिदेयं शर्करामधुयुतःकिल दन्तः।
रक्तगुल्मगुदजासृतियोनिस्त्रावमाशु विनिवारयतीशः॥
(यो. र. प्रदर पेज 842)

Ingredients

- Shuddha Parada- 1 part
- Shuddha Gandhaka - 1 part
- Bola- 2 parts

Method of preparation

Prepare Kajjali with Shuddha Parada and Shuddha Gandhaka in Khalva Yantra. Add the remaining ingredients Bola on by one and mix well in Khalva. Place the mixture in an iron vessel and heat using a sikata Yantra,. Make a shallow pitt in freash cow dung and line it with a Kadali Patra.

चिकित्सकीय गुण (Therapeutic properties)

Rakta Pradara, Raktapitta and Raktarsha.

Matra- 2- 3 Ratti

Anupana- Sharkara and Madhu

Sevana Kala- Thrice daily

Research updates and clinical evidences

Single blind comparative clinical trial done on the patient of Asrigdara to whom Darvyadi Kwath 50 ml BD with Honey as Anupana in one group and Bola parpati 375 mg BD with Anupana of Sharkara and Madhu was given for 3 months in other group. Patients treated with Bola parpati were found safe and better treatment in Asrigdara. Reference- Neelam verma, Kalpana Sharma. A comparative clinical study of Darvadi kwatha & Bola parpati in Asrigdara w.s.r. to Dysfunctional uterine bleeding. EJBPS 2019; 6(11):200-204.

Kupipakwa Rasayana

Introduction- In the sequence of Gandhaka Jarana Kupi Pakwa Rasa has been developed. In this method Gandhaka Jarana has been done in Kupi by using Yantra like Baluka or Sikta Yantra. Aacharya Yashodhar Bhat in thirteenth centaury A.D. has described Udaybhaskara Rasa by using Kachghati.

रुचिरकाचघटीविनिवेशितौ सिकतायन्त्रवरेण दिनत्रयम् ।
कुरु भिषग्वरबह्निमधस्ततः स च भवेदरुणः कमलच्छविः ।
उदयभास्करनामरसो ह्ययं भवति रोगविघातकरः स्वयम् ॥
(Ras.Pra.Sudha 3/10-14)

The Paka is done by using Kacha Ghati and Sikta Yantra for three days and when bottom of Kupi looks like colour of lotus flower then heating is stopped. After self-cooling the Rasa obtained is known as Udaybhaskar Rasa which is capable of mitigating the diseases.

Definition- Kupi Pakwa can be defined as follows :

Kupi = Kancha Kupi

Pakwa = Agni Pakwa

Rasa = Parada

Ayan = Place

Kupi Pakwa is that in which the Paka of Parada is done by keeping it into Kacha Kupi and then placing it into Agni.

Types

On the basis of ingredients, it can be of two types-

a) With the presence of Gandhaka and other Dravyas
   Parada + Gandhaka - Rasa Sindoora
   Parada + Gandhaka + Svarna - Makardwaja and Siddha Makardwaja
   Parada + Gandhaka + Tamra-Tamra Sindoora
   Parada + Gandhaka + Vanga + Nausadara - Svarna Vanga

b) With the presence of Gandhaka and Uparasa/ Sadharana Rasa
   Parada + Gandhaka + Hartala - Tal Sindoora
   Parada + Gandhaka + Manhashila - Shila Sindoora
   Parada + Gandhaka + Malla - Malla Sindoora
   Parada + Gandhaka + Hartala + Manhshilla + Malla - Sameerpannaga

c) Without Gandhaka
   Parada + Kasisa + Saindhava lavana - Rasa Pushpa
   Parada + Gandhakamala + Saindhava lavana - Rasa Karpoora

On the basis of place from where it is collected-

a) Galastha (from neck portion of Kupi)
   Rasa Sindoora, Malla Sindoora, Rasa Pushpa, Rasa Karpoora

b) Talastha (From bottom part of Kupi)
Svarna vanga, Sameer Pannaga

c) Ubhayastha (From both neck as well as bottom)
Makardwaja, Siddha Makardwaja

Procedure

It can involves the following steps-

1. Preparation of Kupi wrapped with mud smeared cloth.
2. Filling of Kajjali to Kupi.
3. Placing of Kupi into Baluka Yantra/EMF
4. Application of Heat
5. Observation for Siddhi Lakshana.
6. Corking of Kupi mouth
7. Self cooling
8. Breaking of Kupi
9. Collection of product

1. **Preparation of Kupi-** The Kupi which is used for the preparation of Kupi Pakwa should be wrapped for seven times by cotton cloth smeared with Multani Mitti. For this first one layer is wrapped over the Kupi and when it is dried then another layer should be wrapped till seven layers are completed when it is completely dried it should be used.
2. **Filled of Kajjali-** The next step is filling of Kajjali into the Kupi. For the convenient filling one can used plastic keep. Kajjali should only be filled when it is complete dry after Bhawana.
3. **Placing of Kupi into Baluka Yantra/EMF-** After filling of Kajjali to the Kupi it is placed into Baluka Yantra or vertical electric muffle furnace. In Baluka Yantra Kupi should placed after placing sand having one inch thickness.
4. **Application of Heat-** Heating process in the preparation of Kupi Pakwa is very unique. It is given in increasing order i.e. Mridu, Madhyama and Tivra fashion. The average temperature range and time for these pattern is as follows :

a. Mridu Agni- 00-2000C for 4 hours
b. Madhyam Agni- 200-4000C for 4 hours
c. Tivra Agni - 400-6300C for 4 hours

Kajjali melts on Mridu Agni and Sulphur fumes comes out to this stage of heating. At the Madhyam Agni the flame of Sulphur comes out and product (Rasa Sindoora) is formed. While at Tivra Agni flame disappears and sublimation takes place. There are some other Kupi Pakwa in which the above pattern is not followed.

Rasa Pushpa and Rasa Karpoor- Only Mridu Agni is given

Svarna Vanga - Maximum temperature around 4200C is given.

5. **Observation for Siddhi Lakshana-** When flame of Gandhaka is disappeared the following. Siddhi Lakshana are observed before corking of mouth of Kupi.

a) **Red bottom-** The bottom of Kupi looks like Bal Aruna (Rising Sun)

b) **Sheeta Shalaka test-** Sheeta Shalaka is inserted into Kupi carefully and taken out it looks grey in colour showing mercury deposition.

c) **Coin test-** When a coin is place over mouth of Kupi and it is replaced then free mercury adhere to it.

d) **Honey comb-** The bottom of Kupi looks like honey comb.

6. **Corking of Kupi-** When Siddhi Lakshana appeared then mouth of Kupi is corked and temperature around 630^{0}C is given for 35-40 minutes after this heating is stopped in case of EMF.
7. **Self-cooling-** When the Kupi is self-cooled on next day it is taken out from Baluka Yantra/ EMF.
8. **Breaking of Kupi-** Kupi is break to collect the product. For this purpose, jute tread is dipped with Kerosene oil is wrapped to Kupi and it is burnt when it becomes hot then it is wrapped with wet cloth. By doing so Kupi breaks easily.
9. **Collection of products-** After breaking of

Kupi product is collected carefully avoiding glass particles.

Necessary Equipment

1. Kupi-
काच मृत्तिकयोः कूपी हेम्नोऽयस्तारयोरपि।
कालालायस्कृतो लेपः खटिकालवणाधिकः॥
(A.P. 1/194)

Kupi made up of Kach (Glass), soil, Various metals like Svarna, Rajat, Loha etc. can be used. We in our Guru tradition used brown coloured bottle for the preparation.

2. **Cotton cloth and Multani Mitti-** It is used for covering of Kupi for seven times so it becomes more thermolabile.
3. **Vertical Electric-** Muffle Furnace or Baluka Yantra.
4. **Kupi Stand-** For the preparation of Kupi.
5. **Shalaka-** It is of two types-
   - **Hot Shala-** It is of having thickness of half centimetre diameter made of iron. It is used for excessive burning of Sulphur deposited around the neck of Kupi during the process.
   - **Sheeta Shalaka-** It is used to see the Gandhaka Jeerna stage. For this purpose, we can use thin rods of bicycle wheel.
6. **Khalva Yantra-** For the preparation of Kajjali.
7. **Coin-** To see the free mercury
8. **Mudra -** For the corking of Kupi mouth after the completion of process.

Shelf life- 10 years

Swarna Vanga
A.F.I. - I, Kupipakva, 15:9
Rasamruta 3/ 95

रूद्रभागमितं वङ्गं दर्व्यां दत्वाऽनलेन्यसेत्।
विद्रुते तु तदर्धं हि सूतं तत्र विनिक्षिपेत्॥
शीघ्रं निक्षिप्य खल्वेऽथ निम्बूनीरेण पेषयेत्।
दत्वाऽथ सैन्धवं किञ्चित् वहुशःक्षालयेत्ततः॥
नरसारं गन्धकं च रसतुल्यं प्रदापयेत्।
सम्पेष्य चातियत्नेन श्लक्ष्ण चूर्णं तु कारयेत्॥
पाचयेत् सिकतायन्त्रे चतुर्याममतिन्द्रितः।
निर्धूमं जायमाने च काच कूपीमुखे भिषक्॥
सन्दशेन गृहीत्वा च कूपीं भूमौ तु विन्यसेत्।
काचकूपीं निभिद्यथ कूपिकातलसंस्थितम्॥
स्वर्णवङ्गं स्वर्णवर्णं भिषग्यत्नात् समाहरेत॥
(रसामृत 3/95-100)

Ingredients

- Vanga Bhasma- 12 parts
- Shuddha Parada- 6 parts
- Shuddha Navasadara- 6 parts
- Shuddha Gandhaka- 6 parts
- Nimbu Swarasa- quantity sufficient

Method of preparation

Shuddha Gandhak was added to Vanga pishti and was subjected to the process of continuous trituration. During this process, the mixture changed from grey colour to dark grey colour. Trituration was done till this mixture became black, very fine and attains uniform consistency. Shuddha Navasadara was added in above mixture and again ttiturated properly. Lastly, Shuddha Kami Shora was added in above mixture. This mixture was triturated properly. Trituration was done till mixture became black, very fine, uniform and lustreless.

Prepared Kajjali was slowly filled in mud smeared bottle (Kanchkupi) upto 1/3rd level of Kanchkupi. The inner surface of the bottle was cleaned thoroughly before filling the Kajjali. The Kanchkupi containing Kajjali was put in a special apparatus known as Baluka Vantra (sand bath), for paka (heating). Heat treatment was given in gradual increasing way (Kramagni), The whole procedure took 18 hrs. After completion of Paka, corking of Kanchkupi was done cautiously and temperature was further maintained for 2 hrs. Thereafter, the Kupi was left for selfcooling. Next day after achievement of Swangashita (self cooled) state, Kanchkupi was taken out from the Baluka Yantra (sand bath) and Kapadmitti over the Kupi was removed carefully. On gentle tapping at the level of string, the Kanchkupi broke into two parts. The material deposited at the base was collected by gentle tapping and with forceps. Absolute golden

and light weighted material was collected. The obtained Swarna vanga was washed with water to remove excess of Kshara added during preparation.

Chemical/phytochemical composition- SnS2, Tin sulphide

Pharmacodynamics and pharmacokinetics

Rasa- Tikta, Lavana, Amla Rasa

Guna- Ruksha, Shita

Virya- Shita

चिकित्सकीय गुण (Therapeutic properties)

Jirna Kasa, Shwasa, Prameha and Mutra Roga Marga.

Matra- 125- 250mg

Anupana- Navanita and Madhu

Sevana Kala-Twice daily

Kala Maryada-

बहुलारजोविमिश्रंत्वपि नागकेसराढ्यम्।
यशदोत्थभूतियुक्तं सुविभं स्वर्णवंगम्॥
परिशीलितं सपथ्यं दिनसप्तकं प्रयत्नात्।
विनिवारयेद्धि शुक्लप्रदरोस्थितां तु बाधाम्॥
(र.त. 18/85-86)

Swarna Vanga, Jatamasi Churna, Nagakeshara, yashada Bhasama for seven days in Shweta Pradara.

परिशीलितं तथेदं खलु मास मात्र योगात्।
विनिहन्ति शुक्रमेहं सुचिरोत्थितं प्रकामम्॥
(र.त. 18/87)

One month in Shukra Meha condition.

Research updates and clinical evidences

- Swarna Vanga has shown significant hypoglycaemic effect in normoglycemic rats though in prophylaetic and in alloxan induced diabetic rats the effect is not found statistically significant. Reference- P Suresh. Damodar Joshi. KD Gode. BK Chakravarthy. Effect of Swarna Vanga on Madhumeha in Albino Rats. Anc Sci. Life; VIII (1) July 1988:30-37.
- Swarna Vanga prepared with equal parts of Parada, Gandhaka, Navasadara, Vanga and Kalmisora is having better result with relief in the symptoms as 52.94% in the patients used as Vajukaran. Swarna Vanga was administered in a dose of 250 mg BD for 45 days with milk as Anupana. Reference- Pharmaceutic-clinical study of Swarna Vanga wsr to Vajeekarana effect Rajendra Pradad Sharma. Santosh Kumar Mishra. PK Prajapati. 1999.

Makaradhwaja
A.F.I. - I, Kupipakva, 15: 2, B. R. Vajikarana 2/ 237

स्वर्णादष्टगुणं सूतं मदर्गयेत् त्रिकगन्धकम्।
रक्तकार्पासकुसुमैः कुमार्यदिभ र्विमर्दयेत्॥
शुष्कं काच घटी रूद्धं बालुकायन्त्रगं हठात्।
पक्वं कुर्याद्रसेन्द्रं तन्नवार्क किरणोपमम्॥
भागोऽस्य भागाश्चत्वारः कर्पूरस्य सुशोभनाः।
लवङ्गं मरिचं जातीफलं कर्पूरमात्रया॥
मेलयेद् मृगनाभिञ्च गद्याणकमितं ततः।
श्लक्ष्णपिष्टो रसो नाम जायते मकरध्वज॥
(भै.र.बाजी. 108-111)

Ingredients

- Shuddha Swarna - 1 part
- Shuddha Parada- 8 part
- Shuddha Gandhaka- 24 parts
- Rakta Karpasa Pushpa Swarasa- quantity sufficient
- Kumari Swarasa- quantity sufficient

Method of preparation

Prepare the amalgam of Suddha Swarna Patra (leaves) and Suddha Parada by triturating in Khalva yantra. Add Suddha Gandhaka to it and prepare Kajjali by triturating in Khalva yantra. Then triturate it with Rakta Karpasa Pushpa Svarasa and Kumari Svarasa and dry it well. Then it should be filled in Kachakupi wrapped with seven layers of clay and cloth and closed its mouth followed by sealing with clay and cloth. Then it should be placed in Valuka Yantra and subjected to heating process by following graded schedule i.e. Mridu, Madhyama and Trivragni. On cooling, the kacakupi should be broken and collect the content ressembles

with that of morning raising sun. Then it should be added with following ingredients by triturating in Khalva yantra. Karpra Churna (40gm), Lavanga Churna (40 gm), Maricha Churna (40 gm), Jatiphala Churna (40 gm) and Kasturi (5 gm). This preparation is known as Makaradhvaja and it should be stored in glass bottles.

Chemical/phytochemical composition

Makardwaja contains 83.60% of Hg, 13.55% of Sulphur and very little amount of Gold 33.35 ppm Makardwaja in tri/hexagonal (Alpha) form of mercury sulphide.

चिकित्सकीय गुण (Therapeutic properties)

करोत्यग्निबलं पुंसां बलिपलितनाशनम्।
मेधायुःकान्तिजननः कामोद्दीपनकृन्महान्॥
अभ्यासात्साधकः स्त्रीणां शतं जयति नित्यशः।
रतिकाले रतान्ते च पुनः सेव्यो रसोत्तमः॥
माहानिं करोत्यासां प्रमदानां सुनिश्चितः।
कृत्रिमं स्थावर विषं जङ्गमं वर्षवारि च॥
न विकाराय भवति साधकानाञ्च वत्सरात्।
मृत्युञ्जयो यथाभ्यासान्मृत्युं जयति देहिनाम्॥
तथायं साधकेन्द्रस्य जरामरणनाशनः॥

(भै.र.वाजी.)

Agni Vriddhikara, Balakara, Vali, PalitaNashana, medhajanana, Ayu Vriddhikara, Kanti Vardhaka , Rasayana , Vajirkara etc.

Matra-

वल्लं वल्लद्वयं वाथ ताम्बूलीदल संयुतम्।
भक्षयेन्मधुरं स्निग्धं मृदुमांसवातलम्॥
शृतशीतं सितायुक्तं दुग्धं गोभवमाज्यकम्।
मद्याद्यं मिष्टपरं मद्यानि विविधानि च॥

(भै.र.वाजी.)

Dosage- 375 mg- 750 mg

Anupana- Tambula Patra (betel leaf), Mila and honey

Pathyapathya- Madhura, snigdha, mridu, mamsa, avvtala dravyas, boiled and cold milk added with sugar, gokshura, goghrita, madhu and different types of madya.

Sevana Kala - Ratikala (Before intercourse), Ratante (After intercourse).

Kala Maryada - Upto one year.

Research updates and clinical evidences

- Animal study done on Makardwaj shows no sign of toxicity in repeated oral administration of drug in 90 days. No significant changes were observed in the histopathological studies of vital organs.

  Reference- Evidence based safety of Ayurvedic Herbo mineral formulation. CCRAS Publications. p69-72.
- Makardwaj prepared with Swarna in different form that in Swarna Patra, Swarna Varka and Swarna Bhasm and all the three prepared samples were clinically trialed in the patients of Diabetes. Drug were administered in dose of 125 mg with 125 mg of Guduchi Ghana 15 minutes before meal with honey for 28 days. Result shows highly significant reduction in sign and symptoms of all the three groups where Makardwaja prepared with Swarna Bhasma showed comparatively better result in over all effect of therapy amongst test drugs.

  Reference Khedekar S. Ravi shankar B. Patgiri B.J. Prajapati PK. A Pharmaceutico pharmaco clinical study of Makardhwaja prepared by Swarna patra, Varka and Bhasma w.s.r. Madhumeha (Diabetes Mellitus) MD dissertation. IPGT & RA Jamnagar, GAU, 2004.

Sameerpannaga Rasa
A.F.I. - I, Kupipakva, 15:8, A.A.G.S. Part - 4 Page 88

पारदं गन्धकं मल्लं हरितालं मनःशिला।
एतच्चूर्णीकृतं सर्वं मर्दयेच्च दिनत्रयम्॥
काचकूप्यां विनिक्षिप्य वालुकायन्त्रके न्यसेत्।
क्रमाग्निना पचेत् सम्यग्यामष्टेन च मुद्रयेत्॥
स्वाङ्गशीतं समुद्धृत्य नाम्नाऽसौ वातपन्नगः।

(आयु.औषधि. गु.ध. शास्त्र भाग 4 पेज 88)

Ingredients

- Shuddha Parada- 1 part
- Shuddha Gandhaka- 1 part

- Shuddha Malla-1 part
- Shuddha Haratala-1 part
- Shuddha Manashila-1 part

Method of preparation

Mix. Shuddha Prada and Gandhaka in Khalava Yantra to make Kajjali. Adding remaining drugs one by one and triturate for three days. Fill the powdered mixture into a glass bottle (Kachakupi). Cover the bottle with cloth smeared inmmud repeating seven times up to neck. Place the bottle in a Valuka Yantra. Apply slow heat, moderate and gradually increasing the temp. for eight Yama. After cooling , collect the Samirapannaga Rasa in from neck of the bottle.

Chemical/phytochemical composition-EDX study shows the presence of Arsenic (AS), Sulphur (S), Mercury (Hg) and Carbon (C). Ref- Thakur B. Katoch S. Takur S.K. Kashyapa CP. Pharmaceutico-anlyatical standardization and preclinical safety evaluation of herbomineral formulation (Sameerpanag Ras) in rats. Comparative clinical pathology (20211) 30:935-944 (Springer).

चिकित्सकीय गुण (Therapeutic properties)

Sannipataja Roga, Kaphonada, Kapahaja Sandhibandhana, Jwara, Shwasa and Kasa.

Matra-62 mg - 125mg

Anupana-Tambula Patra Swarasa, Madhu

Pathyapathya-Acc. to disease condition

Sevana Kala-Morning time

Research updates and clinical evidences

- Study on Sammerpannaga Rasa to investigate its neuro protective effect on the neurobehavioral dysfunction and associated neuro-inflammation induced by transient Internal Carotid Artery occlusion (ICAO) in mice model show that it has significantly reduced Neurological Deficit Score and improved the motor co-ordination at different time intervals port-ICAO. Reference- Priya Jhelum, Abhipradnya B. Wahul Avijeet Kamla, Sudhir Kumawat, Arvin D Kumar, Kamlesh Kumar Bhutani, Shailendra mani Tripathi, Sumana chakravarty. Sammer Pannag Rasa mixture (SRM) improved neuro behavioral deficits following acute ischemic strobe by alttennating neuro-inflammatory response. Journal of Ethnopharmacology; 197;2017;147-156.
- Randomized double blind clinical study done on the effect of Sameera Pannaga Rasa in the management of Tamaka Shwasa where 52 patients were treated with Sameer Pannaga Rasa. The dose given was 30 mg BD for 4 weeks with leaf of Piper betal. The study reveals that Sameer Pannaga Rasa can be used as an effective drug in bronchial asthama. Reference- Mashru M. Galib R. Shukla VJ, Ravi Shankar B, Pajapati PK. Effect of Sammer Pannaga Rasa (Arsenomercurical formulation) in the management of Sameer Pannaga Rasa (Arsenomercurial formlation) in the management of Tamaka Shwasa (Bronchial Asthama). Randomized double blind clinical study Ayu. 2013 Oct; 34(4):346-51.

Pottali Rasayana

Pottali Kalpana is also a type of Murchchhana in which Parada, Gandhaka and other ingredients like mtals etc. are being subjected to Paka process. However the Pottali can be made by doing Agni Samyoga or without Agni Samyoga. In Pottali Kalpana the ingredients are made into a compact form for easy administration. Pottali first time prepared by Puta paka method is available in Rasa Ratnakar. Gandhaka Drava Paka method is described by Rasa Prakash Sudhakar and other texts. Normally Pottalis are of Pugakar shape but it may be of Puga matra Gutikritva or Karsha mana Varatika. Hamsa Pottali is made without Agni Samyoga.

Definition

विस्तारितस्य वस्तुतः अल्पो भवनं पोट्टम्।
पोट्टलति गृह्णति इति पोट्टली॥

(Para. Vig. P 168)

Expanded things are when concise and collected into small size then it can be termed as Pottali.

Importance- Pottali Kalpana is type of Gandhaka Murcchana and the dose is very less. Pottali Kalpana are used after rubbing it then mixing it with suitable vehicle. These can be used in emergency conditions and can be transported easily.

Types- According to Paka it can be of following types-

1. Puta Paka
2. Bhavana
3. Dugdha Paka

Pottali	Process	Reference
Ratna Garbha Pottali	Puta Paka	Rasa Ratnakar
Shankha Garbha Pottali	Puta Paka	Rasa Ratnakar
Hema Garbha Pottali	Puta Paka	Rasendar Sar Sangrah
Hamsa Pottali	Bhavana	Rasendar Sar Sangrah
Hema Garbha Pottali II	Hema Garbha Pottali II	Rasa Prakash Sudhakar
Lokeshwar Pottali	Puta Paka	Rasendra Chintamani
Hema Garbha Pottali I	Kapard Poorna Putapaka	Sharangadhara Samhita
Hema Garbha Pottali II	Sikta Yantra	Yoga Ratnakar
Hema Garbha Pottali IV	Bali Drava Paka	Yoga Ratnakar
Reto Rodhan Pottali	Dugdha Paka	Siddha Bheshaja M.M.

Procedure- Various method for the preparation of Pottali Rasa are described these are follows:

1. **Bhavana method-** In this method Bhavana is given to the ingredients by means of Khalva Yantra and made into Churna or pill form.
2. **Puta Paka method-** In this method first ingredients are given Bhavana by using mentioned liquid then Puta is given by doing Sharava Samputa using Musha, Pot, Mrigashringa, Varatika or Shankha etc. Bhudhara or Gaja Puta depending upon nature of ingredients is given.
3. **Gandhaka Drava Paka method-** It is done in following steps.
   - Bhavana to the ingredients is given and it is made into Shikhraakar/pugakara.
   - Then it is wrapped by silk cloth following by tagging with cotton thread.
   - Gandhaka is taken in an earthen pot/Enamel pot or Borosil Glass and prepared Pottali is hanged into it. Temperature is provide to melt the Gandhaka (120^{0}C-150^{0}C). Dola Yantra is also used for this purpose.
   - Paka is performed till the colour of Gandhaka turns to Vyoma Varna (Sky colour)
   - After that heating is stopped and cloth is removed after completed cooling. It should have metallic sound which is characteristic of Pottali.

Necessary Equipment- Sharava Samputa, Musha, silk cloth earthen pot/Enamel pot or Borosil Glass

Shelf life- May be as of Rasaaushadhi

Hemagarbha Pottali
A.F.I. - II, Rasayoga, 16:66
Rasamruta Rasavigyaniya 9/218

शुद्ध सूतं चतुर्भागं द्विभागं गन्धकस्य च।
भागमेकं स्वर्णभस्म त्रिभागं शुल्व भस्म च॥
कुमारी रस संयुक्तं सप्ताहं मर्दयेदृढम्।
गुटिकां कारयेत्तस्य शङ्खवाकारां भिषग्वरः॥
वस्त्रे किञ्चिद्बलिं दत्वा गुटीं तत्र निधाय च।
मृत्पात्रे गन्धकं दत्वा गुटीं तत्र निधाय च॥

मन्दाग्नि पचेद्यावद् व्योम वर्ण तु गन्धकम्।
किञ्चिच्छीते ततो वस्त्रमपसार्यं प्रयत्नतः॥
पोट्टली हेमगर्भाख्या सन्निपाते प्रयुज्यते।
आर्द्रक स्वरसे घृष्टा पर्णखण्डरसेऽथवा॥

(रसामृत रसविज्ञा. 9/218-222)

Ingredients

- Shuddha Parada - 4 parts
- Shuddha - 2 parts
- Swarna Bhasma- 1 part
- Tamra Bhasma- 3 parts
- Kumari Swarasa- quantity sufficient

Method of preparation

Take Shuddha Parada in Karala and mix it with Shuddha Gandhaka for the preparation of Kajjali. Add Tamra and Swarna Bhasma, Add Kumari Swarasa to the mixture for Mardana for seven days. Place the Apakwa Pottali in Shuddha Gandhaka powder over a silk cloth. Tie the Pottali and hang it in porcelain glass beaker containing Ashuddha Gandhaka. Keep the setup on hotplate with low flame recording the temp. every 30 minutes to keep Gandhaa in liquid form. The next day, when the temp. of Pottali reaches room temp. remove the outer covering of the Pottali. Take out Pottali, scrap off any Gandhaka adhered to the outer with a knife. Stone in air tight glass container.

चिकित्सकीय गुण (Therapeutic properties)

Sannipataja Jwara

Matra- 125mg

Anupana- Adraka Swarasa, Parnakhanda Rasa

Pathyapathya-

अनम्लमन्नं सघृतं भुञ्जीत मधुरं दधि।
प्रायेण जाङ्गलं मासं प्रदेयं घृतपाचितम्॥
सुदुग्धभक्तंदद्याच्च जातेऽग्नौ सान्ध्य भोजने।
सघृतान्मुदगवटान्त्यञ्जनेष्व वचारयेत्॥

(शा.म. 12/65-66)

Pathya- Amla Rahita Ghruta, Madhuara, Dadhi, Ghruta, Jangala Mamsa etc.

Apathya- Tila Taila, Vyayama, Maithuna, Matsya etc.

Sevana Kala- Morning

Research updates and clinical evidences

XRD analysis shows the presence of compounds like HgS, S, HgO, AnO, S etc. Standardization of Pottali Kalpana w.s.r. to Hema Garbha Pottali. Yadav Pranit Amulkar Rao Shankar K. 2014. Thesis submitted to DSR. Raj Ayu. Uni. Jodhpur.

5 CHAPT. Aushadhi Kalpa-II (Compound Drugs/ Formulations)

Syllabus

1. Dashamoola Kwatha (AFI Part I Page 55)
2. Mahamanjistadi Kwatha (AFI Part I page 59)
3. Pushyanuga Churna (AFI-Part I, Page 113)
4. Sudarshana Churna (AFI Part I Page 116)
5. Lavana Bhaskara Churna (AFI-Part I, Page 114)
6. Bilvadi Gutika (AFI Part I Page 188)
7. Chitrakadi Gutika (AFI-Part I, Page 186)
8. Sanjivani Vati (B.R. Jwaradhikara)
9. Vyoshadi Vati (AFI Part III Page 253)
10. Bala Chaturbhadra Rasa (B.R. Balarogadhikara)
11. Simhanada Guggulu (AFI-Part I, Page 71)
12. Yogaraja Guggulu (AFI-Part I, Page 69)
13. Chyavanaprashavaleha (AFI Part I page 37)
14. Dadimavaleha (Y.R. Jwaratisaradhyaya)
15. Panchagavya Ghrita (AFI Part I Page 90)
16. Brahmi Ghrita (AFI Part I Page 93)
17. Narayana Taila (AFI Part I Page 138)
18. Neelibhringadi Taila (AFI Part I Page 139)
19. Panchaguna Taila (AFI-Part II, Page 145)
20. Aravindasava (AFI Part I page 7)
21. Ashokarishta (AFI Part I page 8)
22. Kumaryasava (AFI Part I page 10)
23. Kutajarishta (AFI Part I page 10)
24. Gandhakadya Malahara (AFI-Part II, Page 165)
25. Lepa Guti (AFI Part III page 232)

Learning objectives

1. Describe Ingredients, therapeutic importance, dose, anupana, pathya-pathya, duration of treatment, sevana kala, shelf life, research updates and clinical evidences of Dashamoola Kwatha, Pushyanuga Churna, Sanjivani Vati, Chitrakadi Gutika, Simhanada Guggulu, Yogaraja Guggulu, Chyavanaprashavaleha, Gandhakadya Malahara, Ashokarishta, Kutajarishta, Panchagavya Ghrita, Bilvadi Gutika.
2. Describe Ingredients, indications, dose, anupana, pathyapathya, duration of treatment, sevana kala, shelf life, and clinical evidences of Mahamanjistadi kwatha, Sudarshana Churna, Vyoshadi Vati, Bala

Chaturbhadra Rasa, Lavana Bhaskara Churna, Narayana Taila, Neeliringadi Taila Aravindasava, Kumaryasava.

3. Describe Ingredients, indications, dose, anupana, pathyapathya, duration of treatment, sevana kala, shelf life, and clinical evidences of Panchaguna Taila, Dadimavaleha, Bramhi Ghrita
4. Understand & Recite following classical kalpas. Describe Amayika prayoga of each formulation.Understand probable mode of action as per Ayurveda Search and Record relevant reaserch articles. Create charts describing details of these drugs. Review market availability & popularities of these drugs among practicing vaidyas & near by population.
5. Explain ethical aspect of administration of compound drugs mainly regarding duration of the treatment given.
6. Describe ingredients, with its dose, therapeutic importance, anupana and pathya-apathya along with its clinical evidences and Research updates
7. Enlist the formulations with its dose, anupana and indications

Total - 16 hours (Lecture :14 hour, Non-lecture: 02 hours)
Marks- 5 marks, MCQ- Yes, SAQ (5 Marks)- Yes and LAQ (10 Marks)- No

Dashamoola Kwatha (AFI Part I Page 55)

शालिपर्णीपृष्ठिपर्णीबृहतीद्वयगोक्षुरैः ॥
बिल्वाग्निमन्थस्योनाकाश्मरीपाटला युतैः ।
दशमूलमिति ख्यातं कथितं तज्जलं पिवेत् ॥
(शा.म. 2/28-29)

Ingredients

- Shalaparni - 1 part
- Prushniparni - 1 part
- Bruhati - 1 part
- Kantakari - 1 part
- Gokshura - 1 part
- Bilva - 1 part
- Agnimantha - 1 part
- Shyonaka - 1 part
- Gambhari - 1 part
- Patala - 1 part

Chemical/phytochemical composition-

1. शालपर्णी - Gangetinin, Gangetin-3H, desmodin, hypaphorine etc.
2. पृश्निपर्णी - U. logopodioidos flavonoids. etc.
3. वृहती - Solamine, β-Sitosterol, Carotene, Carpesterol etc.
4. कण्टकारी - β-carotene, diosgenin, carpestered, solasodine, solasonine etc.
5. गोक्षुर - Compesterol, β-sitosterol, Stigmasterol (in Root)
6. बिल्व - Xanthotoxin, umbelliferone, marmesin etc.
7. अग्निमन्थ - β-sitosterol, luteolin, aphelandrine, premnine etc.
8. श्योनाक - Baicalein, Tetrulin, Oroxindin, ?-Sitosterol etc.
9. गम्भारी - β-sitosterol, ceryl alcohol, gmelinol, apigemin etc.
10. पाटला-Crystalline bitter substance.

Pharmacodynamics and pharmacokinetics

क्र. सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	विल्व	तिक्त, कषाय	लघु, रूक्ष	उष्ण	कटु
2.	अग्निमन्थ	तिक्त, कटु, कषाय, मधुर	लघु, रूक्ष	उष्ण	कटु
3.	श्योनाक	मधुर, तिक्त, कषाय	लघु, रूक्ष	उष्ण	कटु
4.	काश्मर्य	तिक्त, कषाय, मधुर	गुरु	उष्ण	कटु

5.	पाटला	तिक्त, कषाय	लघु, रूक्ष	अनुष्ण	कटु
6.	शालपर्णी	मधुर, तिक्त	गुरु, स्निग्ध	उष्ण	मधुर
7.	पृश्निपर्णी	मधुर तिक्त	लघु, स्निग्ध	उष्ण	मधुर
8.	गोक्षुर	मधुर	गुरु, स्निग्ध	शीत	मधुर
9.	वृहती	कटु, तिक्त	लघु, रूक्ष	उष्ण	कटु
10.	कण्टकारी	कटु, तिक्त	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु

चिकित्सकीय गुण (Therapeutic properties)

पार्श्वशूले ज्वरे श्वासे कासे श्लेष्मसमुद्भवे।
पिप्पली चूर्ण संयुक्तं दशमूली जलं पिबेत्॥
(भै.र.कास 13)

पिप्पलीचूर्णसंयुकं वातश्लेष्मज्वरापहम्।
सन्निपातज्वरहरं सूतिकादोषनाशनम्॥
शोषशैत्यश्रमस्वेदकासश्वासविकारनुत्।
हृत्कण्ठग्रहपार्श्वार्तितन्द्रामस्तकशूलहृत्॥
(शा.म. 2/30-31)

Indication

Parshwashula, Vata Shleshma Jwara, Sannipataja Jwara, Sutika Dosha, Shosha, Bhrama, Sweda, Shwasa, Kaphaja Kasa Nashaka, disorders of Hrudya, Kantha Tandra, Mastaka Shula etc.

Matra - 48 ml

Anupana- Pippali Churna

Pathyapathya- Acc. disease condition

Sevana Kala- Twice daily

Research updates and clinical evidences for each of the following formulations

- Animal study done to evaluate the analgesic, anti-inflammatory and anti-platelet potential of Dashmoola reveals that Dashmoola formulation alone and its combination with aspirin showed comparable anti-inflammatory, analgesic and anti platelet effects to aspirin.

  Reference- Parekar R R, Bolagave SS, Maratha PA, Rege NN. Experimental evaluation of analgesic. Anti inflammatory and anti-platelet potential of Dashmoola. J Ayurveda Integr Med. 2015 Jan-Mar; 6(1):11-8.

- Comparative clinical study done to evaluate the effect of Dashmoola Kwath Nadi Sweda and local steam bath in Sandhi Gata Vata shows that significant result on all the subjective paramters. Inter group comparison showed that Dashmoola kwath Nadi Sweda was more effective as compared to the steam bath.

  Reference- Namita Patel. A comparative clinical study to Evaluate the effect of Dashmool. Kwath Nadi Sweda and Local Steam Bath in Sandhi Gata Vata. International Ayurvedic Medical Journal (On line) 2022.

Mahamanjistadi Kwatha (AFI Part I page 59)

मञ्जिष्ठामुस्त कुटज गुडूची कुष्ठ नागरैः।
भार्ङ्गी क्षुद्रावचानिम्ब निशाद्वयफलत्रिकैः॥
पटोल कटुकी मूर्वा विडङ्गासन चित्रकैः।
शतावरी त्रायमाणा कृष्णेन्द्रयववासकैः॥
भृङ्गराजमहादारुपाठाखदिर चन्दनैः।
त्रिवृद्धरणकैरातवाकुचीकृतमालकैः॥
शाखोटक महानिम्ब करञ्जातिविषाजतैः।
इन्द्रवारुणिकानन्तासरिवापर्पटैःसमैः॥
एभिः कृतं पिवेत्क्वाथं कणा गुग्गुलुं संयुतम्।
(शा.म. 2/137-141)

Ingredients- Manjishta, Musta, Kutaja, Guduchi, Kushta, Nagara, Bharngi, , Kshudra, Vacha, Nimba, Two types of Nisha, Triphala, Patola, Katuki, Murva, Vidanga, Asana, Chitraka, Shatavari, Trayamana, Krishna, Indrayava, Vasaka, Bhringaraja, Mahadaru, Patha, Khadira, Chandana, Trivruta, Varuna, Kirata, Bakuchi, Kritamalaka, Shakhotaka, Maha Nimba , Karanja, Ativisha, Jala, Indravaruni, Ananta, Sariva and Parpata taken with powder of Kana and Guggulu is knowns Bruhata Manjishtadi Kwatha.

Chemical/phytochemical composition

Phytochemical screening of Maha manjishthadi Kwatha show the presence of alkaloids, steriods,

triterpenoids, tannins, phenolic compounds Saponins and flavonoids. Quantification study shows the presence of ellagic acid, gallic acid and lupeol. Reference- Kapil thakur, P. Mini Mol, Madhura Gawhankar, Himanshu Gupta, Priyanka Patil, Shakina Salmani and Mansi Thakur (2020). Physico chemical characterization and anti microbial properties of Maha manjishthadi kwatha : An Ayurvedic formulation. Ann. Phytomed, 9(1):78-90.

Pharmacodynamics and pharmacokinetics

क्र. सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	मञ्जिष्ठा	तिक्त, मधुर	गुरू, रूक्ष	उष्ण	कटु
2.	मुस्त	तिक्त, कटु, कषाय	लघु, रूक्ष	शीत	कटु
3.	कुटज	तिक्त, कषाय	लघु, रूक्ष	शीत	कटु
4.	गुडुची	कषाय, तिक्त	स्निग्ध, गुरु	उष्ण	मधुर
5.	कुष्ठ	तिक्त, कटु, मधुर	रूक्ष, लघु	उष्ण	कटु
6.	शुण्ठी	कटु	गुरू, रूक्ष	उष्ण	मधुर
7.	भारङ्गी	तिक्त	लघु, रूक्ष	उष्ण	कटु
8.	कण्टकारी	कटु, तिक्त	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
9.	वचा	कटु, तिक्त	लघु, तीक्ष्ण	उष्ण	कटु
10.	निम्ब	तिक्त, कषाय	लघु, रूक्ष	शीत	कटु
11.	हरिद्रा	तिक्त, कटु	रूक्ष, लघु	उष्ण	कटु
12.	दारूहरिद्रा	तिक्त, कषाय	रूक्ष, लघु	उष्ण	कटु
13.	हरीतकी	पंचरस लवण वर्ज्य	लघु, रूक्ष	उष्ण	मधुर
14.	विभीतकी	कषाय	लघु, रूक्ष	उष्ण	मधुर
15.	आमलकी	अम्ल रस प्रधान पंच रस	गुरू, रूक्ष, शीत	शीत	मधुर
16.	पटोल	तिक्त, कटु	लघु, रूक्ष	उष्ण	कटु
17.	कटुकी	तिक्त	रूक्ष, लघु	शीत	कटु
18.	मूर्वा	तिक्त, कषाय	गुरू, रूक्ष	उष्ण	कटु
19.	विडङ्ग	कटु, कषाय	लघु, रूक्ष	उष्ण	कटु
20.	असन	कषाय, तिक्त	लघु, रूक्ष	शीत	कटु
21.	चित्रक	कटु	रूक्ष, लघु	उष्ण	कटु
22.	शतावरी	मधुर, तिक्त	गुरू, स्निग्ध	शीत	मधुर
23.	त्रायमाण	तिक्त	लघु, रूक्ष	उष्ण	कटु
24.	पिप्पली	कटु	लघु, स्निग्ध, तीक्ष्ण	उष्ण	मधुर
25.	वासा	तिक्त, कषाय	लघु, रूक्ष	शीत	कटु
26.	भृंगराज	कटु, तिक्त	रूक्ष, लघु	उष्ण	कटु
27.	देवदारू	तिक्त, कटु, कषाय	लघु, रूक्ष	उष्ण	कटु
28.	पाठा	तिक्त	लघु, तीक्ष्ण	उष्ण	कटु
29.	खदिर	तिक्त, कषाय	लघु, रूक्ष	शीत	कटु
30.	श्वेत चन्दन	तिक्त, मधुर	रूक्ष, लघु	शीत	कटु
31.	त्रिवृत	कटु, तिक्त	लघु, रूक्ष	उष्ण	कटु
32.	वरुण	तिक्त, कषाय	लघु, रूक्ष	उष्ण	कटु
33.	किराततिक्त	तिक्त	लघु, रूक्ष	शीत	कटु
34.	बाकुची	कटु, तिक्त	लघु, रूक्ष	उष्ण	कटु
35.	आरग्वध	मधुर	गुरू,स्निग्ध, मृदु	शीत	मधु
36.	शाखोटक	तिक्त, कषाय	लघु, रूक्ष	उष्ण	कटु
37.	करंज	तिक्त, कषाय, कटु	लघु, तीक्ष्ण	उष्ण	कटु
38.	अतिविषा	कटु, तिक्त	लघु, रूक्ष	उष्ण	कटु
39.	ह्रीवेर	तिक्त, कटु	लघु, रूक्ष	उष्ण	कटु
40.	इन्द्रवारूणी	तिक्त	लघु, रूक्ष	उष्ण	कटु
41.	सारिवा	मधुर, तिक्त	गुरु, स्निग्ध, तीक्ष्ण	शीत	मधुर
42.	पर्पट	तिक्त	लघु	शीत	कटु

चिकित्सकीय गुण (Therapeutic properties)

अष्टादशसु कुष्ठेषु वातरक्तार्दिते तथा।
उपदंशे श्लीपदे च प्रसुप्तौ पक्षघातके॥
मेदोदोषे नेत्ररोगे मञ्जिष्ठादिः प्रशस्यते।

(शा.म. 2/141-142)

It is beneficial in the eighteen types of Kushta, Vatarakta, Ardita, Upadamsha, Shlipada, Supti, Pakshaghata, Medoroga and Netra Roga.

Matra- 48 ml

Anupana-Pippali, Guggulu

Pathyapathya- Acc. disease condition

Sevana Kala- Twice daily

Research updates and clinical evidences

Antimicrobial study done on Mahamanjishthadi Kadha shows that it could inhibit growth of staphylococcus aurous, Candida albicans, Pseudomonas aeruginosa, staphylococcus epidermidis and Escheridia coli.

Chemical characterization- Management with Mahamanijisthadi Kwatha 10 ml. three times in a day for 45 days along with Avipattikara churna 2.5 gm twice a day, Gandhaka Rasayana half tablet three times a day and Karappan tablet 1/2 tablet BD in Atopic dermatitis (Patient of age 7 year old boy) shows reduction in itching and dryness of skin.

Reference- Chetan Kumar VK, Soumaya P. Anjana R. Ayurvedic management of child hood atopic dermatitis-A case report. J. Ayur. Herb Med 2017; 3(2):57-59.

Pushyanuga Churna (AFI-Part I, Page 113)

पाठाजम्ब्वाम्रयोर्मध्यं शिलाभेदं रसाञ्जम् ।
अम्बष्ठकी मोचरसः समङ्गा पद्मकेशरम् ॥
वाह्लीकातिविषा मुस्तं बिल्वं लोध्रं सगैरिकम् ।
त्रिफलां मरिचं शुण्ठी मृद्वीका रक्तचन्दनम् ॥
कट्वङ्गवत्सकानन्ताधातकीमधुकार्जुनम् ।
पुष्येणोद्धृत्य तुल्यानि श्लक्ष्ण चूर्णानि कारयेत् ॥

(भै.र. प्रदर 66/25-27)

Ingredients

Patha, Jambu, Amra, Pashanabheda, Rasanjana, Ambasthaki, Mocharasa, Lajjali, Padamakeshara, Kumkuma, Ativisha, Musta, Bilva, Lodra, Shuddha Gairika, Katphala, Maricha, Shunthi, Draksha, Rakta Chandana, Aralu, Kutaja, Anantamula, Dhataki, Madhuka and Arjuna each one part.

Method of preparation- Prepare the fine powders of all the ingredients separately and mixed together by triturating in khalva yantra. On completion of the process, it should be stored in airtight glass bottles. All the ingredients of this formulation should be collected during the day of Pusyami constellation. Hence this preparation is popularly known as Pushyanuga curna and it has been favoured by Acharya Atreya. Ambastha is popular in south others take Lakshamana in place of Ambastha.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

Shows the presence of betulinic acid, mangiferin, chlorogenic acid Ursolic acid, ?-Sitosterol, Lupeol

Reference- Shailajan S. Menon S, Singh D, Swar G, Bhosale S. Application of modern RP-HPLC technique for the quantitation of betulinic acid from traditional drug symplocos race mosa Roxb. J. App Pharm Sci. 2017; 7 (03) 129-134.

Reference- Rathore P. Daniel K, Daniel V. Singh C, Yashwant Gupta AK Estimation of Active components in Gokshura Tablet and Pushyang Churna Formulation using High-performance thin layer chromatography method. International Journal of Drug Delivery Technology 2022; 12 (4):1507-1512.

Reference- Shailajan S. Patil Y, Menons. Markerbased Chemo profiling of a traditional formation : Pushyamega churna. J. App Pharm Sci, 2017; 7(08):239-245.

क्र. सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	पाठा	तिक्त	लघु, तीक्ष्ण	उष्ण	कटु
2.	जम्बू	कषाय, मधुर, अम्ल	लघु, रूक्ष	शीत	कटु
3.	आम्र	कषाय	लघु	शीत	कटु
4.	शैलभेद	तिक्त, कषाय	लघु, स्निग्ध	शीत	कटु

5.	रसांजन (दारूहरिद्रा)	तिक्त, कषाय	लघु, रूक्ष	उष्ण	कटु
6.	अम्बष्ठकी	तिक्त	लघु तीक्ष्ण	उष्ण	कटु
7.	मोचरस	मधुर, कषाय	लघु, स्निग्ध	शीत	मधुर
8.	समंगा	तिक्त, कषाय	लघु, रूक्ष	शीत	कटु
9.	पद्मकेशर	तिक्त, कषाय	लघु, रूक्ष, तीक्ष्ण	उष्ण/ अनुष्ण	कटु
10.	अतिविषा	कटु, तिक्त	लघु, रूक्ष	उष्ण	कटु
11.	वाहलीक	कटु	स्निग्ध,लघु, तीक्ष्ण	उष्ण	कटु
12.	मुस्ता	तिक्त, कषाय, कटु	लघु, रूक्ष	शीत	कटु
13.	बिल्व	कषाय, तिक्त	लघु, रूक्ष	उष्ण	कटु
14.	लोध्र	कषाय, तिक्त	लघु, रूक्ष	शीत	कटु
15.	गैरिक	मधुर, कषाय	स्निग्ध	शीत	—
16.	कटफल	कटु, तिक्त, कषाय	लघु, तीक्ष्ण	उष्ण	कटु
17.	मरिच	कटु	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
18.	शुण्ठी	कटु	गुरु, तीक्ष्ण, रूक्ष	उष्ण	मधुर
19.	मृद्वीका	मधुर	गुरू, स्निग्ध, मृदु	शीत	मधुर
20.	रक्तचंदन	मधुर, तिक्त	रूक्ष, गुरू	शीत	कटु
21.	कटवंग	तिक्त, कषाय	रूक्ष	शीत	कटु
22.	वत्सक	तिक्त, कषाय	लघु, रूक्ष	शीत	कटु
23.	अनन्ता	मधुर, तिक्त	गुरू, स्निग्ध	शीत	मधुर
24.	धातकी	कषाय	लघु, रूक्ष	शीत	कटु
25.	मधुक	मधुर, कषाय	गुरू, स्निग्ध	शीत	मधु
26.	अर्जुन	कषाय	लघु, रूक्ष	शीत	कटु

चिकित्सकीय गुण (Therapeutic properties)

तानि क्षौद्रेण संयोज्य पाययेत्तण्डुलाम्बुना।
असृग्दरातिसारेषु रक्तं यच्चोपवेश्यते॥
दोषागन्तुकृता ये चे बालानां ताश्च नाशयेत्।
योनिदोषं रजोदोषं श्वेत नीलं सपीतकम्॥
स्त्रीणां श्यावारूणं तच्च तत्प्रसह्य तिवर्त्तयेत्।
चूर्णं पुष्यानुगं नाम हितमात्रेयपूजितम्॥
(भै.र.प्रदर. 28-30)

Indication

Asrugdara, Shweta Peadara, Rajodosha, Arsha, Yoni Dosha Nashaka.

Matra- 1-3 gms

Anupana- Madhu and Tandulodaka

Pathyapathya- Acc. to disease condition

Sevana Kala -Twice daily

Research updates and clinical evidences

- Multicentric single-arm clinical study done on 80 diagnosed patients of abnormal uterine bleeding to whom Pushyanug churna 3 gm and Usheerasava 20 ml were given twice daily for 90 days. At the end of study highly significant changes ($P<0.001$) were observed in frequent prolonged bleeding and psychological general well-being index score. In this study no adverse drug reactions and significant changes in safety parameters were found.
- Reference- A Chandla, N. Singh, C. Antomy, D. Sharma. A.Tripathi, S. Ota, R. Rana. A. Kumar, N. Srikanth. Effect of Ayhurvedic formulation on Abnormal uterine bleeding (Asrigdara) : A prospective uncontrolled Multi center Clinical Study. Journal of Herbal Medicine; 42: Dec 2023:100802.

Sudarshana Churna (AFI Part I Page 116)

कालीयकन्तु रजनी देवदारु वचा घनम्।
अभया धन्वयाश्च शृङ्गी क्षुद्रा महौषधम्॥
त्रायन्ती पर्पटं निम्बं ग्रन्थिकं बालकं शटी।
पौष्करं मागधी मूर्वा कुटजं मधुयष्टिका॥
शिग्रूद्भवं सेन्द्रमवं वरी दार्वी कुचन्दनम्।
पद्मकं सरलोशीरं त्वचं सौराष्ट्रीका स्थिरा॥
यमान्यतिविषा बिल्वं मरिचं गन्धपत्रकम्।
धात्री गुडुची कटुकं सचित्रकपटोलकम्॥

कलसी चैव सर्वाणि समभागानि कारयेत्।
सर्वद्रव्यस्य चार्द्धन्तु कैरातं सम्प्रकल्पयेत्॥
एतत् सुदर्शनं नाम ज्वरान् हन्ति न संशयः।
(भै.र.ज्वर. 436-440)

Ingredients

Kaliyaka (Pita Chandana), Haridra, Devadaru, Vacha, Musta, Haritaki, Dhanvayasa, Karkataka Sringi, Kantakari, Shunthi Trayamana, Parpata, Nimba, Pippali Mula, Balaka, Shati, Pishakaramula, Pippali, Murva, Kutaja, Yasthimadhu, Sigru Beeja, Infrayava, Shtavari, Daruharidra, Patranga, Padamaka, Sarala, Usira, Twaka, Saurastra Mrittika, Shaliparni, Yavani, Ativisha, Bilva, Maricha, Gandha Patraka, Amalaki, Guduchi, Katukarohini, Chitrakamula, Patola Patra, Prusniparni, each one part and Kiratatikta 43 parts.

Method of preparation

The fine powder of all the ingredients separately and mixed thoroughly in Khalva Yantra. This preparation is known as Sudarashana churna.

Chemical/phytochemical composition

Xanthonoid (Mangiferin), Triterpenoids (Oleanolic acid & Ursolic acid, Phenolics (Gallic acid, quercetin, curcumin),(Gallic acid, quercetin, curcumin) Reference - Kaur P, Gupta RC, Dey A, Malik T, Pandey DK. Validation and quantification of major biomarker in Maha Sudarshan Churna-An ayurvedic polyherbal formulation through high performance thin layr chromatography. BMC complement Med Ther. 2020 Jun II; 20(1):184.

Pharmacodynamics and pharmacokinetics

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	कालीयकङ (पीत चन्दन)	तिक्त	लघु, रूक्ष	शीत	कटु
2.	हरिद्रा	तिक्त, कटु	रूक्ष, लघु	उष्ण	कटु
3.	देवदारू	तिक्त, कटु, कषाय	लघु, रूक्ष	उष्ण	कटु
4.	वचा	तिक्त, कटु	लघु, तीक्ष्ण	शीत	कटु
5.	मुस्ता	तिक्त, कटु, कषाय	लघु, रूक्ष	शीत	कटु
6.	हरीतकी	पंचरस लवण वर्ज्य	लघु, रूक्ष	उष्ण	मधुर
7.	धन्वयास	मधुर, तिक्त, कषाय	लघु	उष्ण	मधुर
8.	कर्कटशृंगी	तिक्त, कषाय	लघु, रूक्ष	उष्ण	कटु
9.	कण्टकारी	कटु, तिक्त	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
10.	शुण्ठी	कटु	गुरु, रूक्ष, तीक्ष्ण	उष्ण	मधुर
11.	त्रायमाण	तिक्त	लघु, रूक्ष	उष्ण	कटु
12.	पर्पट	तिक्त	लघु	शीत	कटु
13.	निम्ब	तिक्त, कषाय	लघु, रूक्ष	शीत	कटु
14.	पिप्पलीमूल	कटु	लघु, रूक्ष	उष्ण	कटु
15.	ह्रीवेर	तिक्त, कटु	लघु, रूक्ष	उष्ण	कटु
16.	शटी	कटु, तिक्त, कषाय	लघु, तीक्ष्ण	उष्ण	कटु
17.	पुष्कर मूल	तिक्त, कटु	लघु, तीक्ष्ण	उष्ण	कटु
18.	पिप्पली	कटु	लघु, स्निग्ध, तीक्ष्ण	उष्ण	मधुर
19.	मूर्वा	तिक्त, कषाय	गुरू, रूक्ष	उष्ण	कटु
20.	कुटज	तिक्त, कषाय	लघु, रूक्ष	शीत	कटु
21.	मधुयष्ठी	मधुर	गुरू, स्निग्ध	शीत	मधुर
22.	शिग्रु	कटु, तिक्त	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
23.	कुटज	तिक्त, कषाय	लघु, रूक्ष	शीत	कटु
24.	शतावरी	मधुर, तिक्त	गुरु, स्निग्ध	शीत	कटु
25.	दारुहरिद्रा	तिक्त, कषाय	लघु, रूक्ष	उष्ण	कटु
26.	रक्तचन्दन	तिक्त, मधुर	गुरु, रूक्ष	शीत	कटु
27.	पद्मक	तिक्त, कषाय	लघु, स्निग्ध	शीत	कटु
28.	सरल	कटु, तिक्त, मधुर	लघु, स्निग्ध, तीक्ष्ण	उष्ण	कटु

29.	उशीर	तिक्त, मधुर	रूक्ष, लघु	शीत	कटु
30.	त्वक्	कटु, तिक्त, मधुर	लघु, तीक्ष्ण	उष्ण	कटु
31.	सौराष्ट्री	कषाय	—	—	—
32.	शालपर्णी	मधुर, तिक्त	गुरु, स्निग्ध	उष्ण	मधुर
33.	यवानी	कटु	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
34.	अतिविषा	कटु, तिक्त	लघु, रूक्ष	उष्ण	कटु
35.	बिल्व	तिक्त, कषाय	लघु, रूक्ष	उष्ण	कटु
36.	मरिच	कटु	लघु, तीक्ष्ण	उष्ण	कटु
37.	प्रसारिणी	तिक्त	गुरु, सर	उष्ण	कटु
38.	आमलकी	पंचरस लवण वर्ज्य	गुरू, रूक्ष, शीत	शीत	मधुर
39.	गुडुची	कषाय, तिक्त	स्निग्ध, गुरु	उष्ण	मधुर
40.	कटुकी	तिक्त	रूक्ष, लघु	शीत	कटु
41.	चित्रक	कटु	रूक्ष, लघु	उष्ण	कटु
42.	पटोल	तिक्त, कटु	लघु, रूक्ष	उष्ण	कटु
43.	पृश्निपर्णी	मधुर, तिक्त	लघु, स्निग्ध	उष्ण	मधुर
44.	किराततिक्त	तिक्त	लघु, रूक्ष	शीत	कटु

चिकित्सकीय गुण (Therapeutic properties)

पृथग्दोषांश्च विविधान् समस्तान् विषम ज्वरान्।
प्राकृतं वैकृतञ्चाधि सौम्यं तीक्ष्णमथापि च।
अन्तर्गतं वहिःस्थञ्च निराम साममेव च॥
ज्वरमष्टविधं हन्ति साध्यासाध्यमथापि वा।
नानादोषद्भवञ्चैव वारिदोष भवन्तथा॥
विरुद्ध भेषज भवं ज्वरमाशु व्यपोहति।
प्लीहानं यकृतं गुल्मं हन्त्यवश्यं न संशयः॥
यथा सुदर्शनं चक्रं दानवानां निषूदनम्।
तथा ज्वराणां सर्वेषामिदमेव निगद्यते॥

(भै.र.ज्वर 313-317)

Indications- Jwara caused by single Dosha, all types of Vishama Jwara, Prakruta and Vaikruta Jwara, Saumya and Tikshna Jwara, Antargata and Barhirgata Jwara, Sama and Nirama Jwara, eight types of Jwara, Sadhya and Asadhya Jwara, Jwara due to different Dosha, Varidoshaja Jwara, Viruddha Bheshaja Jwara are cured immediately. Pliharoga, Yakruta Roga, Gulma cured without anu doubt just like Sudrashana Chakra.

Matra- 2 4 gms

Anupana- Warm water

Pathyapathya- Acc. disease condition.

Sevana Kala- Twice daily

Research updates and clinical evidences

- In Vitro and In Vivo study done on Sudarshana powder to evaluate its antioxidant potentials showed statistically significant decrease in the serum level of thiobarbituric acid reactive substance in the test rats when compared with the control group suggesting its potent antioxidant activity.

  Reference- Weerakoon wass, Parera PK, Gunasekera D, Suresh TS. Evaluation of the In Vitro and In Vivo Antioxidant potentials of Sudarshana powder. Evid based completment alternat Med. 2018 Apr 10; 2018:6743862.

Lavana Bhaskara Churna (AFI-Part I, Page 114)

सामुद्रलवणं कार्यमष्टककर्षमितं बुधैः।
पञ्च सौवर्चलं ग्राह्यं विडं सैन्धवधान्यकात्॥
पिप्पली पिप्पलीमूलं कृष्णजीरक पत्रकम्।
नागकेशरतालीसम्लवेतसकं तथा॥
द्विकर्षमात्राण्येतानि प्रत्येक कारयेबुधः।
मरिचं जीरकं विश्वमेकैकं कर्षमात्रकम्॥
दाडिमं स्याच्चतुष्कर्षं त्वगेले चार्धकार्षिके।
एतच्चूर्णीकृतं सर्व लवणं भास्कराभिधम्॥

(शा.म. 6/139-141)

Ingredients

Eight Karsha of Samudra Lavana, five of Sauvarchala Lavana, Two Karsha each of Bida Lavana, Saindhava Lavana, Dhanyaka, Pippali, Pippalimula, Krishna Jiraka, Patra, Nagakeshara, Talisa, Amlavetasa, one Kasrha each Maricha Jiraka, Vishwa, four Karsha of Dadima and half Karsha each of Twaka and Ela.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र.सं.	द्रव्य	Chemical/Phytoc-hemical Composition	रस	गुण	वीर्य	विपाक
1.	सामुद्र लवण	मुख्यताः NaCl	लवण, सतिक्त, समधुर	स्निग्ध	—	मधुर
2.	सौवर्चल लवण	मुख्यताः NaCl	लवण, मधुर	विशद, स्निग्ध लघु	उष्ण	—
3.	विड लवण	मुख्यताः NaCl	लवण, क्षारयुक्त	लघु, तीक्ष्ण, उष्ण	—	—
4.	सैन्धव लवण	मुख्यताः NaCl	लवण	स्निग्ध	नोष्ण	तीक्ष्ण
5.	धान्यक	Carotene, eugenol, coriandrin etc.	कषाय, तिक्त मधुर	लघु, स्निग्ध	उष्ण	मधुर
6.	पिप्पली	Piperene etc.	कटु	लघु, स्निग्ध, तीक्ष्ण	उष्ण	मधुर
7.	पिप्पली मूल	Piperene etc.	कटु	लघु, रूक्ष	उष्ण	कटु
8.	कृष्ण जीरक	Essential oil, sterols etc.	कटु	लघु, रूक्ष	उष्ण	कटु
9.	तेजपत्र	Eugenol, cinnamic aldehyde etc.	कटु, मधुर	लघु, तीक्ष्ण	उष्ण	कटु
10.	नागकेशर	Mesura ferrol, β-Sitosterol etc.	कषाय तिक्त	लघु,रूक्ष तीक्ष्ण	उष्ण/ अनुष्ण	कटु
11.	तालीस	Abiesin, β-Sitosterol etc.	मधुर,तिक्त	लघु,तीक्ष्ण	उष्ण	कटु
12.	अम्लवेतस	Garcinol, Cambogin etc.	अम्ल	लघु, रूक्ष	उष्ण	अम्ल
13.	मरिच	Piperene, Pipnonal etc.	कटु	लघु, तीक्ष्ण	उष्ण	कटु
14.	श्वेत जीरक	Cuminin etc.	कटु	लघु, रूक्ष	उष्ण	कटु
15.	शुण्ठी	Gingerol, Zingiberol etc.	कटु	गुरु, रूक्ष तीक्ष्ण	उष्ण	मधुर
16.	दाडिम (बीज)	Tannin etc.	मधुर, कषाय, अम्ल	लघु, स्निग्ध	उष्ण	मधुर/अम्ल
17.	त्वक्	Cinnamaldehyde, eugenol etc.	कटु, तिक्त, मधुर	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
18.	एला	Bornneol, Camphere etc.	कटु, मधुर	लघु,रूक्ष	शीत	कटु

चिकित्सकीय गुण (Therapeutic properties)

शाण प्रमाणं देयं तु मस्तु तक्रसुरासवैः।
वातश्लेष्म भवं गुल्मं प्लीहानमुदरंशयम्॥
अर्शांसि ग्रहणी कुष्ठं विबन्धं च भगन्दरम्।
शोफं शूलं श्वासकासावामवातं चहृद्रुजम्॥
मन्दाग्निं नाशयेदेतद्दीपनं पाचनं परम्।
सर्वलोकहितार्थाय भास्करेणोदितं पुरा॥
(शा.म. 6/142-144)

Indications

One Shana with Mastu or Takra or Sura in Vata Kaphaja Gulma, Pliha, Uadara, Kshaya, Arsha, Grahani,Kushta, Vibandha, Bhagandara, Shopha, Shula, Shwasa, Kasa, Amavata, Hruruja, Mandagni and acts as good Dipana and Pachana.

Matra- One Shana

Anupana- Mastu, Takra, Sura, Ushna Jala

Pathyapathya- Acc. to disease condition

Sevana Kala- For Agni Dipana along with food

Research updates and clinical evidences

In their study done by Wange M et al in the 15 patients of Grahani Roga 9 patients got marked relief in the symptoms like Aruchi, Agnimandya, Trushna, Chardi and Aadhyamana. Wange M. From the proceedings of insight Ayurveda 2013 Coimbatore 24th and 25th May 2013.

Bilvadi Gutika (AFI Part I Page 188)

विल्वस्य मूलं सुरसस्य पुष्पं फलं करञ्जस्य नतं सुराहवम् ।
फलत्रिकं व्योषनिशाद्वयं च वस्तस्य मूत्रेण सुसूक्ष्मपिष्टम् ॥
(अ.ह.उ. 36/84)

Ingredients

Bilva, Tulasi Pushpa, Karanja, Tagara, Devadaru, Haritaki, Bibhitaki, Amalaki, Shunthi, Maricha, Pippali, Haridra, Daruharidra and Vasta Mutra.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र.सं.	द्रव्य	Phytochemicals	रस	गुण	वीर्य	विपाक
1.	विल्व	Root-Xanthotoxin, Umbilliferone etc.	कषाय तिक्त	लघु,रूक्ष	उष्ण	कटु
2.	तुलसी पुष्प	Cardinene, Camphene eugenol etc.	कटु तिक्त	लघु,रूक्ष	उष्ण	कटु
3.	करंज	Karnjin, Pongapin Pongal etc.	तिक्त, कटु कषाय	लघु,तीक्ष्ण	उष्ण	कटु
4.	तगर	Hydroxyvalaranone acetoxyvaleranone etc.	तिक्त, कटु, कषाय	लघु, स्निग्ध	उष्ण	कटु
5.	देवदारू	Attantone etc.	तिक्त, कटु, कषाय	लघु, रूक्ष	उष्ण	कटु
6.	हरीतकी	Chebulinic acid, Tannic acid etc.	पंचरस लवण वर्ज्य	लघु, रूक्ष	उष्ण	मधुर
7.	विभीतकी	β-Sitosterol, Mannitol etc.	कषाय	लघु, रूक्ष	उष्ण	मधुर
8.	आमलकी	VitC Phyllemblin etc.	पंचरस लवण वर्ज्य	गुरु, शीत, रूक्ष	शीत	मधुर
9.	शुण्ठी	Gigerol, α curcumence etc.	कटु	गुरु,रूक्ष,तीक्ष्ण	उष्ण	मधुर
10.	मरिच	Pipeeren, β-Sitosterol etc.	कटु	लघु, तीक्ष्ण	उष्ण	कटु
11.	पिप्पली	Piperene, β-Sitosterol etc.	कटु	लघु, स्निग्ध, तीक्ष्ण	उष्ण	मधुर
12.	हरिद्रा	Curcumene, curcone etc.	तिक्त, कटु	रूक्ष, लघु	उष्ण	कटु
13.	दारुहरिद्रा	Karachine, taxilamine etc.	तिक्त, कषाय	लघु, रूक्ष	उष्ण	कटु
14.	वस्त मूत्र	—	कटु, तिक्त	—	—	—

चिकित्सकीय गुण (Therapeutic properties)

Luta, Vruchika, Sarpa Visha, Visuchika, Ajirna, Gara Dosha, Jwara, Bhutra Badhahara (psychological conditions).

Matra- Nasya, Anjana and Lepa depended on condition.

Anupana- Nasya, Anjana and Lepa depended on condition.

Research updates and clinical evidences

Experimental study done on Wistar Albino rats in which Bilwadi Gutika was administered to evalute its anti venom activity of Cobra Venom where venom was used having LD 50 of 1098 ig/kg using OECD 425 protocol. Result shows good protection by Visha Bilwadi Gutika against low intensity envenomation. Moderate protection was observed against high dose venom injection in acute conditions. Reference- Sunitha Gopa Kumar, Gazala Hussain. An experimental study on Anti Venom Activity of Visha Bilwadi Gutika in Cobra venom injected Wistar Albino Rats. Annals of Ayurvedic Medicine 9(4), 256-256.2021.

Clinical study done on Bilwadi Gutika show that it is effective in skin disorder including psoriatic lesions and it is also effective in post Ayurvedic management of non-healing idiopathic granulomatous mastitis with lesser adverse effects than conventional medicine and surgery.

Reference- KM Divya, Allam Ramkrishna, S. Balasundar Govardhan Sahani. A review on an ayuvedic medicine, Vilwadi Gutika used in the management of toxicity. Annals of phytomedicine 12 (2): 161-168,2023.

Chitrakadi Gutika (AFI-Part I, Page 186)

चित्रकं पिप्पली मूलं द्वौ क्षारौ लवणानि च।
व्योषं हिङ्ग्वजमोदां च चव्यं चैकत्र चूर्णयेत्॥
गुटिका मातुलुङ्गस्य दाडिमस्य रसेन वा।
कृता विपाचयत्यामं दीपयत्याशु चानलम्॥
(च.चि. 15/96-97)

Ingredients and method of preparation

Chitraka, Pippalimula, two Kshara (Yava and Sarji), Lavana (salt), Trikatu, Hingu, Ajamoda and Chavya are mixed together and triturated with either Matulunga Swarasa or Dadima Swarasa and prepare Gutika.

Chemical/phytochemical composition

Shows the presence of Zingiberene, Plumbagin, Piperine in the HPTLC study. Along with it may contain phytochemicals of other ingredients. It also contain NaCl, KCl from salt as well as Yavakshara NaCl in form of Halite and KCl in for of Sylvine* and Na, K etc. from Sarjikshara. Reference- Akash Kawasthl. Piyush Gandhi. Validation of Yavakshara preparation An Ayurvedic Alkaline formulation. Annals of Ayurvedia Med. 2017:6(3-4)115-121.

Pharmacodynamics and pharmacokinetics

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	चित्रक	कटु	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
2.	पिप्पलीमूल	कटु	लघु, रूक्ष	उष्ण	कटु
3.	यवक्षार	—	लघु, स्निग्ध	—	—
4.	सर्जिक्षार	कटु	तीक्ष्ण, उष्ण	—	—
5.	सौवर्चल लवण	लवण, मधुर	लघु, स्निग्ध, विशद	उष्ण	—
6.	सैन्धव लवण	लवण	स्निग्ध	नोष्ण	—
7.	विड लवण	लवण, क्षार युक्त	तीक्ष्ण	नोष्ण	—
8.	सामुद्र लवण	लवण, सतिक्त, समधुर	स्निग्ध	—	मधुर
9.	औदभिद लवण	तिक्त, कटु, क्षार	लघु, तीक्ष्ण	—	—
10.	शुण्ठी	कटु	गुरु, रूक्ष, तीक्ष्ण	उष्ण	मधुर
11.	मरिच	कटु	लघु, तीक्ष्ण	उष्ण	कटु

12.	पिप्पली	कटु	लघु, स्निग्ध, तीक्ष्ण	अनुष्ण शीत	मधुर
13.	हींग	कटु	लघु, स्निग्ध, तीक्ष्ण	उष्ण	कटु
14.	अजमोदा	कटु, तिक्त	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
15.	चव्य	कटु	लघु, रूक्ष	उष्ण	कटु
16.	मातुलुंग	अम्ल	लघु, स्निग्ध, तीक्ष्ण	उष्ण	अम्ल
17.	दाडिम स्वरस	मधुर, अम्ल, कषाय	लघु स्निग्ध	उष्ण	मधुर/ अम्ल

चिकित्सकीय गुण (Therapeutic properties)

Indications

This Chitrakadya Gutika is useful for digestion of Ama and stimulation of the Agni. Plumbagin from Chitraka exhibits cardiotonic, hepato-protective, neuroprotective and antiatherogenic properties. Besides these it also has anti-inflammatory and analgesic and Antidepressant property. Being Anti inflammatory, analgesic, antidepressant it acts in Grahani Roga.

Matra- 2-4 Gutika

Anupana- Warma Jala, Takra.

Pathyapathya- Acc. disease condition

Sevana Kala-After Bhojana

Research updates and clinical evidences

- Study done on Chitrakadi Vati for estimation of total alkaloid using UV-spectrophotometer reveals that out of 16 ingredients 9 contain alkaloid. This Vati contains 0.16% of concentration of alkaloid.

  Reference- Ajanal M. Gundkalle MB, Nayak SV. Estimation of total alkaloid in Chitrakadi vati by UV spectrophotometer. Anc Sci life. 2012 Apr; 31(4):198-201.
- Single case study done on Chitrakadi Vati and Ekakala Bhojana in alleviating gastrointestinal symptoms shows that significant improvement in symptoms such as heaviness of abdomen and head, nausea, excessive salivation and weakness. Reference- Rekha Singh Jatav, Bharat Kumar Padhar. Rashmi Mutha, Muniraj Manmahendra. Management of Mandagni (diminution of Agni) a case study; evaluating the effect of Chitrakadi vati and Ekakala Bhojana (One time meal in day) in alleviating gastrointestinal symptoms. J. Ayurveda Integr Med Sci 2024;3:239-244.

Sanjivani Vati (B.R. Jwaradhikara)

विडङ्ग नागरं कृष्णा पथ्यामलविभीतकम्।
वचा गुडुची भल्लातं सविषं चात्र योजयेत्॥
एतानि समभागानि गोमूत्रेणैव पेषयेत्।
गुञ्जाभा गुटिका कार्या दद्यादार्द्रकजै रसैः॥

(शा.म. 7/18-19)

Ingredients and method of preparation

Vidanga, Nagara, Krishna, Pathya, Amalaka, Bibhitaki, Vacha, Guduchi, Ballataka, and Vatsanabha each one part are powdered and macerated with cow urine and rolled into pills of the size Gunja.

Chemical/phytochemical composition

Vidanga- Embetin, christembine, Shunthi- α-curcumene, gingerol, α & β Zingibernes Zigiberol, Triphala- tannic acid, Vit C, anthraquinone, ellagic acid, Vacha- Acorenone, Guduchi- tinosporin, Bhallataka- bio-flavanoids, Vatsanabha- pseudoaconitine

Pharmacodynamics and pharmacokinetics

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	विडङ्ग	कटु कषाय	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
2.	शुण्ठी	कटु	लघ, स्निग्ध	उष्ण	मधुर
3.	पिप्पली	कटु	लघु, स्निग्ध, तीक्ष्ण	अनुष्ण शीत	मधुर

4.	हरीतकी	पंचरस लवण वर्ज्य	लघु, रूक्ष	उष्ण	मधुर
5.	आमलकी	पंचरस लवण वर्ज्य	गुरु, शीत, रूक्ष	शीत	मधुर
6.	विभीतकी	कषाय	रूक्ष, लघु	उष्ण	मधुर
7.	वचा	कटु तिक्त	लघु, तीक्ष्ण	उष्ण	कटु
8.	गुडुची	तिक्त,कषाय	गुरु, स्निग्ध	उष्ण	मधुर
9.	भल्लातक	कटु, तिक्त कषाय	लघु, स्निग्ध तीक्ष्ण	उष्ण	मधुर
10.	वत्सनाभ	मधुर	रूक्ष, तीक्ष्ण, लघु, व्यवायी, विकासी	उष्ण	मधुर
11.	गोमूत्र	कटु, लवण,	तीक्ष्ण, लघु, उष्ण	—	कटु

चिकित्सकीय गुण (Therapeutic properties)

एकामजीर्णगुल्मेषु द्वे विषूच्यां प्रदापयेत।
तिस्त्रश्च सर्पदष्टे तु चतस्त्रः सांन्निपातिके॥

(शा.म. 7/20-21)

Ajirna, Gulma, Visuchika, Sarpadamsha, Sannipataja Dosha Nashaka.

Matra-

एकामजीर्णगुल्मेषु द्वे विषूच्यां प्रदापयेत।
तिस्त्रश्च सर्पदष्टे तु चतस्त्रः सांन्निपातिके॥

Ajirna and Gulma- one pill with Adraka Swarasa

Visuchika- two pills

Sarpa Damsha - three pills

Sannipataja Jwara - 4 pills

Anupana- Adraka Swarasa, warm water

Pathyapathya- Acc. disease condition

Research updates and clinical evidences

Experimental study done to know the effect of Sanjivani Vati on snake venom poisoning where effectiveness as an anti venom was checked against common cobra venom and Russell's viper venom in experimental mice. Study reveal that Sanjivani Vati enhanced the survival period of nice in Russell's viper venom poisoning while in common cobra venom it was found ineffective. Sanjivani Vati along with Lashunadi vati was found effective as it improves the symptoms after treatment in the management of diarrhoea predominant IBS.

Reference- Tarang Rawat et al: An updated review on Sanjivani vati. International Ayurvedic Medical Journal (On line) 2023 (cited April 2023). 863-871.

Vyoshadi Vati (AFI Part III Page 253)

व्योषाम्लवेतसं चव्यं तालीसं चित्रकं तथा।
जीरकं तिन्तिडीकं च प्रत्येकं कर्ष भागिकम्।
त्रिसुगन्धं त्रिशाणं स्याद्गुडः स्यात्कर्ष विंशतिः॥

(शा.म. 7/22-231/2)

Ingredients and method of preparation

Vyosha, Amlavetasa, Chavya, Talisa, Chitraka, Jiraka, Nintidaka, each one Karsha, three Shana of Trisugandha (ela, Twak and Patra), twenty Karsha Guda are made into pills.

Chemical/phytochemical composition

Vyosha- Piperene, gingerol, Amlavetasa- Garcinol, Cambogin, Talisa Patra -Abiesin, β-sitosterol, Chiraka- Plubagin, Jiraka- Euminin, Trijataka- Cinnamaldehyde, Esogenol, Tintidaka- β-sitosterol, Tiglyol.

Pharmacodynamics and pharmacokinetics

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	शुण्ठी	कटु	गुरू, रूक्ष, तीक्ष्ण	उष्ण	मधुर
2.	मरिच	कटु	लघु, तीक्ष्ण	उष्ण	कटु
3.	पिप्पली	कटु	लघु, स्निग्ध, तीक्ष्ण	उष्ण	मधुर
4.	अम्लवेतस	अम्ल	लघु, रूक्ष	उष्ण	अम्ल
5.	चव्य	कटु	लघु, रूक्ष	उष्ण	कटु
6.	तालीस	मधुर, तिक्त	लघु, तीक्ष्ण	उष्ण	कटु
7.	चित्रक	कटु	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु

8.	जीरक	कटु	लघु, रूक्ष	उष्ण	कटु
9.	तिन्तिडक	अम्ल	लघु, रूक्ष	उष्ण	अम्ल
10.	त्वक्	कटु, तिक्त, मधुर	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
11.	पत्र	कटु, मधुर	लघु, तीक्ष्ण	उष्ण	कटु
12.	एला	कटु मधुर	लघु, रूक्ष	शीत	कटु

चिकित्सकीय गुण (Therapeutic properties)

व्योषादि गुटिका सेयं पीनसश्वासकासजित्।
रुचि स्वरकारी ख्याता प्रतिश्यायप्रणाशिनी॥

(शा.म. 7/23)

Indications

Pinasa, Shwasa, Kasa, Aruchi, Pratishyaya and improve Ruchi (taste) and Swara (voice).

Matra -2-3 Vati

Anupana-Acc. disease condition

Pathyapathya-Acc. disease condition

Sevana Kala- Pinasa, Pratishyaya condition Muhurmuhu

Research updates and clinical evidences

Study done on the 30 patients of Pratishyaya to whom Vyoshadi Gutika in a dose of 2 tablets (each tab. 375 mg) was given with luke warm water for 30 days. The result obtained was satisfactory with maximum improvement (more than 76% symptomatic improvement). No untoward adverse effects were seen in any patients. Reference- Sharma V Dr; From 5th world Ayurveda Congress 2012, Bhopal, Madhya Pradesh, India. 7-10 Dec 2012. OA 01.12. A clinical study of efficacy of Vyoshadi Guitka and Pippalayadi Churna Avapida Nasya in the management of Pratishyaya. Anc.Sci.Life 2012 Dec; 32 (Puppl 1):512

Bala Chaturbhadra Rasa (B.R. Balarogadhikara)

घन कृष्णारूणाशृङ्गी चूर्णं क्षौद्रेण संयुतम्।
शिशोर्ज्वरातिसाघ्नं श्वासकासवमीहरम्॥

(भै.र. 71/38)

Ingredients and method of preparation

Ghana (Musta), Krishna (Pippali), Aruna (Ativisha) and Sringi (Karkatasringi) each one part. Mix all the ingredients thoroughly by triturating in Kalva Yantra. Then it should be stored in airtight glass bottles.

Chemical/phytochemical composition

Screening of phytochemical constituents of Balchaturbhadra Churna shows presence of alkaloids, flavonoids, phenolics, carbohydrate, tannins, sterols and triterpenoids.

Pharmacodynamics and pharmacokinetics

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	मुस्ता	कटु, तिक्त, कषाय	लघु, रूक्ष	शीत	कटु
2.	अतिविषा	कटु, तिक्त	लघु, रूक्ष	उष्ण	कटु
3.	पिप्पली	कटु	लघु, तीक्ष्ण, स्निग्ध	अनुष्ण	मधुर
4.	कर्कटशृङ्गी	कषाय, तिक्त	लघु, रूक्ष	उष्ण	कटु

चिकित्सकीय गुण (Therapeutic properties)

In the treatment of Bala (paediatric) Jwaratisara, Kasa and Shwasa and Vamana in children.

Matra-500mg twice daily

Anupana- Madhu

Pathyapathya-Acc. to disease condition.

Sevana Kala- Shwasa, Kasa condition Muhurmuhu with honey

Research updates and clinical evidences

Acute and chronic toxicity study done on Balchaturbhadra Churna did not produce any signs and symptoms of toxicity even at high dosages. Study done on Balchaturbhadra Churna on bone marrow cellularity suggests that it is not likely to have any mutageni city potential.

Reference- Joshi A. Rajgopala S. Kalyana P.

A critical review on Balachaturabhadra churna: An effective Ayurveda formulation for the pediatric age. IJIIS; 2 (1) April 2019:1-10.

Simhanada Guggulu (AFI-Part I, Page 71)

पलत्रय कषायस्य त्रिफलायाः सुचूर्णितम्।
सौगान्धिकपलञ्चैकं कौशिकस्य पल तथा॥
कुडवं चित्रतैलस्य सर्वमादाय यत्नतः।
पाचयेत् पाकविद्वैद्यः पात्रे लोहमये दृढ़े॥
(भै.र.आम. 29/ 190-191)

Ingredients and method of preparation

Triphala Kwatha 120ml, Shuddha Gandha 40gm, Shuddha Guggulu 40 gm and Eranda Taila 160gm. Mia all the ingredients taken in an strong iron vessel and cooked till it attains solid consistency. Prepare its pills of one gram by weight each uniformly and dry them in shade. On drying these should be stored in glass bottles.

Chemical/phytochemical composition

Triphala- Phenols/Polyphenols, alkaloids, flavonoids, terepenoids, sterols, resins, Guggulu - gallic acid, guggulsterones, quercetin, Eranda Carotenoid, tocopherol, phytosterol, phospholipid, Phenolic compound.

Pharmacodynamics and pharmacokinetics

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	हरीतकी	पंचरस लवणवर्ज्य	लघु, रूक्ष	उष्ण	मधुर
2.	विभीतकी	कषाय	लघु, रूक्ष	उष्ण	मधुर
3.	आमलकी	पंचरस लवणवर्ज्य	गुरु, शीत, रूक्ष	शीत	मधुर
4.	गन्धक	कटु, मधुर	सर	उष्ण	कटु
5.	गुग्गुलु	तिक्त, कटु	लघु, रूक्ष, सूक्ष्म, विशद	उष्ण	कटु
6.	एरण्ड तैल	मधुर, कषाय, अनुरस	गुरु, तीक्ष्ण, सर	उष्ण	मधुर

चिकित्सकीय गुण (Therapeutic properties)

हन्तिवातं तथा पित्तं श्लेष्माणं खञ्जपङ्गुताम्।
श्वास सुदुर्जयं हन्ति कासं पञ्चविध तथा॥
कुष्ठानि वात रक्तानि गुल्मशूलोदराणि च।
आमवातं जयेदेतदपि वैद्य विवर्जितम्॥
एतदभ्यासयोगेन जरापलितनाशनम्।
सर्पिस्तैलवसोपेतमश्नीयाच्छालिषष्टिकम्॥
सिंहनाद इति ख्यातो रोगवारणदर्पहा।
वह्नि वृद्धिकरः पुसां भाषितो दण्डपाणिना॥
(भै.र.आम. 132-135)

Indication

Vata Pitta and Kaphaja Roga, Kanja, Pangu, severe Shwasa, five types of Kasa, Kustha, Vatarakta, Gulma, Shula, Udara, Amavata.

Matra- 3 gm

Anupana- Warm water

Pathyapathya- Shastika Shali with Ghruta, Taila, Vasa.

Sevana Kala- Twice daily

Research updates and clinical evidences

- Study done by Shweta A et al in 24 patients to Amavata in which patients were randomly divided into two groups. In group A Shiva Guggulu 6 9/day while in group B Simhanada Guggulu 6 g/day was administered for 8 weeks. Result shows that Simhanada Guggulu provided better result in compare to Shiva Guggulu.

  Reference- Pandey SA, Joshi NP, Pandya DM. Clinical efficacy of Shiva Guggulu and Simhanada Guggulu in Amavata (Rheumatoid Arthritis) Ayu. 2012 Apr; 33(2):247-54.

- Study done on Simghnad Guggulu extract shows that it exhibit significant ?-amylase inhibition.

  Reference- Kumar et al, ?-Amylase inhibition and antioxidant activity of Singhnad Guggulu in vitro. Journal of Herbal Drug. 4(2);59-62.2013

Yogaraja Guggulu (AFI-Part I, Page 69)

चित्रकं पिप्पलीमूलं यमानी कारवी तथा।
विडङ्गान्यजमोदा च जीरकं सुरदारु च॥
चव्येला सैन्धवं कुष्ठं रास्नागोक्षुरधान्यकम्।
त्रिफला मुस्तकं व्योषं त्वगुशीरं यवाग्रजम्॥
तालीश पत्रं पत्रञ्च श्लक्ष्ण चूर्णानि कारयेत्।
यावन्त्येतानि चूर्णानि तावन्मात्रान्तु गुग्गुलुम्॥
सम्मर्द्य सर्पिषा गाढं स्निग्धे भाण्डे निधापयेत्।

(भै.र.आम. 29/ 156-159)

Ingredients and method of preparation

Chitraka Mula, Pippalimula, Yavani, Krishna Jiraka, Vidanga, ajamoda, Jiraka, Devadaru, Chavya, Ela, Saindhava lavana, Kustha, Rasna, Gokshura, Dhanyaka, Triphala, Musta, Trikatu, Twaka, Ushira, Yavakshara, Talisapatra, Patraka, Shuddha Guggulu and Ghrita. Prepare the fine powder of all the ingredients separately and mixed together thoroughly. Then Shuddha Guggulu should be taken in vessel and melt it by adding little water. Add mixture of fine powder to it and add little quantity of Ghruta to it. Prepare its pills of one gram by weight uniformly and stored them in unctuous vessel.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	चित्रक	कटु	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
2.	पिप्पलीमूल	कटु	लघु, रूक्ष	उष्ण	कटु
3.	यवानी	कटु	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
4.	कारवी	कटु	लघु, रूक्ष	उष्ण	कटु
5.	विडङ्ग	कटु, कषाय	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
6.	अजमोदा	कटु, तिक्त	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
7.	श्वेत जीरक	कटु	लघु, रूक्ष	उष्ण	कटु
8.	देवदारु	तिक्त, कटु कषाय	रूक्ष, लघु	उष्ण	कटु
9.	चव्य	कटु	लघु, रूक्ष	उष्ण	कटु
10.	एला	कटु, मधुर	लघु, रूक्ष	शीत	कटु
11.	सैन्धव लवण	लवण	स्निग्ध	नोष्ण	—
12.	कुष्ठ	तिक्त, कटु, मधुर	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
13.	रास्ना	तिक्त	गुरु	उष्ण	कटु
14.	गोक्षुर	मधुर	गुरु, स्निग्ध	शीत	मधुर
15.	धान्यक	कषाय, तिक्त	लघु, स्निग्ध	उष्ण	मधुर
16.	हरीतकी	कषाय प्रधान पंचरस	लघु, रूक्ष	उष्ण	मधुर
17.	विभीतकी	कषाय	रूक्ष, लघु	उष्ण	मधुर
18.	आमलकी	अम्ल प्रधान पंचरस	गुरु, शीत, रूक्ष	शीत	मधुर
19.	मुस्ता	तिक्त, कटु, कषाय	लघु, रूक्ष	शीत	कटु
20.	शुण्ठी	कटु	गुरु, तीक्ष्ण, रूक्ष	उष्ण	मधुर
21.	मरिच	कटु	लघु, तीक्ष्ण	उष्ण	कटु
22.	पिप्पली	कटु	लघु, तीक्ष्ण, स्निग्ध	उष्ण	मधुर
23.	त्वक्	कटु, तिक्त, मधुर	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
24.	यवक्षार	—	लघु, स्निग्ध	—	—
25.	उशीर	तिक्त, मधुर	रूक्ष, लघु	शीत	कटु
26.	तालीस पत्र	तिक्त, मधुर	लघु, तीक्ष्ण	उष्ण	कटु
27.	पत्र	कटु, मधुर	लघु, तीक्ष्ण	उष्ण	कटु
28.	गुग्गुलु	तिक्त, कटु	लघु, रूक्ष, विशद सूक्ष्म	उष्ण	कटु
29.	घृत	मधुर	स्निग्ध	शीत	मधुर

चिकित्सकीय गुण (Therapeutic properties)

अतो मात्रा प्रयुञ्जीत यथेष्टाहारवानपि॥
योगराज इति ख्यातो योगोऽयममृतोपमः।
आमवातादयवातादीन कृमि दुष्ट व्रणानि च॥
प्लीह गुल्मोदरानाहदुर्नामानि विनाशयेत्।
अग्निञ्च कुरुते दीप्तं तेजोवृद्धि बलं तथा॥

वातरोगाञ् जयत्येष सन्धिमज्जागतानापि ॥
(भै.र.आम. 155-157)

Indications

Amavata, Adhyavata, Krimi,Dustavrana, Pliha Gulma, Udara, Anaha, Arsha, Vata Roga, Sandhigata Vataroga and Majjagata Vataroga. Agnidipana and Tejovruddhi and Bala Vruddhi pharmacological actions.

Matra- one pills twice daily

Anupana- Rasna Saptaka Kwatha, Lasuna Swarasa, Madhu

Pathyapathya- Acc. to Simhanada Guggulu

Sevana Kala- Twice daily

Research updates and clinical evidences

- Guggulu has ability of promoting synthesis of intracellular triglycerides or lowering degradation of intracellular triglycerides there by reducing depth of large and small wrinkles providing skin a smooth appearance. Reference- Jain Anurekha. Gupta VB. Chemistry and pharmacological profile of guggulu-A review. Indian J Trad Know 5 (4) Oct 2006: 478-83.
- Clinical study done osteoarthritis to evaluate the effect of Yograj Guggulu along with Gandharvahasta Taila and Dhanwantra Taila in one hundred and twenty patients in which Yograj Guggulu in a dose of 500 mg was administered thrice a day with lukewarm water after food along with Gandharvashasta taila 6 ml orally with lukewarm water just before bed time with external application of Dhanwantra taila twice a day for 12 weeks. Significant improvement was found in cardinal features of oestioarthiritis was found at the end of therapy in comparison to baseline.
- Safety study-It was observed that saftey laboratory parameters like TLC, DLC, ESR, RFT & LFT were not changed significantly from baseline to end of treatment. Reference- Deepa Makhija Dinesh Baruah, P Radha krishnan et. al. clinical evaluation of Yograj Guggulu. Gandharvahasta Taila and Dhanwantra Taila in the management of Osteoarthritis lena. JRAS. Oct Dec. 2018:2(4):209-216.

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बिल्वोऽग्निमन्थः श्योनाकः काश्मर्यः पाटलिर्बला ।
पर्ण्यश्वतस्त्रः पिप्पल्यः श्वदंष्ट्रा बृहतीद्वयम् ॥
शृङ्गी तामलकी द्राक्षा जीवन्ती पुष्करागुरु ।
अभया चामृता ऋद्धिर्जीवकर्षभकौ शटी ॥
मुस्तं पुनर्नवा मेदा सैला चन्दनमुत्पलम् ।
विदारी वृषमूलानि काकोली काकनासिका ॥
एषां पलोन्मितान् भागाञ्छतान्यामलकस्य च ।
पञ्च दद्यात्तदैकध्यं जलद्रोणे विपाचयेत् ॥
ज्ञात्वा गतरसान्येतान्यौषधान्यथ तं रसम् ।
तच्चामलकमुद्धृत्य निष्कुलं तैलसर्पिषोः ॥
पलद्वादशके भृष्ट्वा दत्त्वा चार्धतुलां भिषक् ।
मत्स्यण्डिकायाः पूताया लेहवत्साधु साधयेत् ॥
षट्पलं मधुनश्चात्र सिद्धशीते प्रदापयेत् ।
चतुष्पलं तुगाक्षीर्याः पिप्पलीद्विपलं तथा ॥
पलमेकं निदध्याच्च त्वगेलापत्रकेशरात् ।
इत्ययं च्यवनप्राशः परमुक्तो रसायनः ॥
कासश्वासहरश्चैव विशेषेणोपदिश्यते ।
क्षीणक्षतानां वृद्धानां बालानां चाङ्गवर्धनः ॥
स्वरक्षयमुरोरोगं हृद्रोगं वातशोणितम् ।
पिपासां मूत्रशुक्रस्थान् दोषांश्चाप्यपकर्षति ॥
अस्य मात्रां प्रयुञ्जीत योपरून्ध्यान्न भोजनम् ।
अस्य प्रयोगाच्च्यवनः सुवृद्धोऽभूत् पुनर्युवा ॥
मेधां स्मृतिं कान्तिमनामयत्वमायुःप्रकर्षं बलमिन्द्रियाणाम् ।
स्त्रीषु प्रहर्षं परमग्निवृद्धिं वर्णप्रसादं पवनानुलोम्यम् ॥
रसायनस्यास्य नरः प्रयोगाल्लभेत जीर्णोऽपि कुटीप्रवेशात् ।
जराकृतं रूपमपास्य सर्वं बिभर्ति रूपं नवयौवनस्य ॥
(च.चि. 1/1/62-74)

Ingredients and method of preparation

Kwatha Dravya (33 Drugs) one Pala (48 gms) each of Bilwa, Agnimantha, Shyonaka, Kashmarya, Patala, Bala, four leaved herbs (Shalaparni, Prishniparni, Mudgaparni, Masaparni), Pippali, Shvadamshtra, Brihati, Kantakari, Karkatshringi, Tamalaki/ Bhumyamalaki, Draksha, Jivanti, Pushkaramula,

Aguru, Abhaya, Amrita Riddhi, Jivaka, Rishabhaka, Shati, Musta, Punarnava, Meda, Ela, Chandana, Utpala, Vidari, Vrusha (roots), Kakoli and Kakanasa (Nasaphala/ Kakatundaka) and 500 fruits of Amalaki. All these drugs together boiled in 1 Drona (12.288 Liters) of water, when it is fully boiled, the decoction and the fruits of Amalaki made into Potali and Swedana is done. The fruits of Amalaki after the removal of seeds to be fried in 12 Pala (567 gm), of each of Ghrita (ghee) and Tila Taila (sesame oil). (6 Pala of Ghrita and 6 Pala of Taila)

{Drugs+ Drava Dravyaboiled and reduced into 1/4th part}

This is added to the decoction, paste along with half Tula (2.400 kg) of sugar candy (Matsyandika/ Khanda Samhati), boiled with the decoction earlier obtained, until it takes the consistency of a Lehya (linctus-semi solid).

When it has cooled down, the following ingredients are added and stirred well.

6 Pala (288 gm) of Madhu (honey), 4 Pala (192 gm) of Tugaksiri, 2 Pala (96 gm) of Pippali, 1 Pala (48 gm) of each of Twak (Cinnamon), Ela (Cardamom), Patra (Cinnamon leaves), Keshara (Nagakeshara). This preparation is famous Chyavanaprasha Rasayana.

Chemical/phytochemical composition

Amalaki contains Vitamin C, Polyphenolics including flavonoids, other phytochemicals present in the Chavyanaprasha are gallic acid, protocatechnic acid, catechin, caffeic acid, vanillic acid, chlorgenic acid, syringic acid, rutin, ferulic acid etc.

Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	विल्व	तिक्त, कषाय	लघु, रूक्ष	उष्ण	कटु
2.	अग्निमन्थ	तिक्त, कटु, कषाय, मधुर	लघु, रूक्ष	उष्ण	कटु
3.	श्योनाक	मधुर, तिक्त, कषाय	लघु, रूक्ष	उष्ण	कटु
4.	काश्मर्य	तिक्त, कषाय, मधुर	गुरु	उष्ण	कटु
5.	पाटला	तिक्त, कषाय	लघु, रूक्ष	अनुष्ण	कटु
6.	बला	मधुर	स्निग्ध, लघु	शीत	मधुर
7.	शालपर्णी	मधुर, तिक्त	गुरु, स्निग्ध	उष्ण	मधुर
8.	पृश्निपर्णी	मधुर तिक्त	लघु, स्निग्ध	उष्ण	मधुर
9.	मुद्गपर्णी	मधुर	लघु, रूक्ष	शीत	मधुर
10.	माषपर्णी	मधुर तिक्त	लघु, स्निग्ध	शीत	मधुर
11.	पिप्पली	कटु	लघु, तीक्ष्ण, स्निग्ध	उष्ण	मधुर
12.	गोक्षुर	मधुर	गुरु, स्निग्ध	शीत	मधुर
13.	वृहती	कटु, तिक्त	लघु, रूक्ष	उष्ण	कटु
14.	कण्टकारी	कटु, तिक्त	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
15.	शृंगी	कषाय, तिक्त	लघु, रूक्ष	उष्ण	कटु
16.	तामलकी	तिक्त, कषाय, मधुर	लघु, रूक्ष	शीत	मधुर

17.	द्राक्षा	मधुर	स्निग्ध गुरु	शीत	मधुर
18.	जीवन्ती	मधुर	लघु, स्निग्ध	शीत	मधुर
19.	पुष्करमूल	तिक्त, कटु	लघु, तीक्ष्ण	उष्ण	कटु
20.	अगरु	कटु, तिक्त	लघु, तीक्ष्ण	उष्ण	कटु
21.	अभया	कषाय प्रधान पंचरस	लघु, रूक्ष	उष्ण	मधुर
22.	गुडुची	कषाय, तिक्त	गुरु, स्निग्ध	उष्ण	मधुर
23.	ऋद्धि	मधुर	—	—	—
24.	जीवक	मधुर	—	शीत	—
25.	ऋषभक	मधुर	—	शीत	—
26.	शटी	कटु, तिक्त, कषाय	लघु, तीक्ष्ण	उष्ण	कटु
27.	मुस्ता	तिक्त, कषाय, कटु	लघु, रूक्ष	शीत	कटु
28.	पुनर्नवा (रक्त)	मधुर, तिक्त, कषाय	लघु, रूक्ष	शीत	कटु
29.	मेदा	—	गुरु	शीत	—
30.	एला	कटु, मधुर	लघु, रूक्ष	शीत	कटु
31.	श्वेत चन्दन	तिक्त, मधुर	लघु, रूक्ष	शीत	कटु
32.	उत्पल	मधुर, कषाय तिक्त	लघु, स्निग्ध	शीत	मधुर
33.	विदारी	मधुर	गुरु, स्निग्ध	शीत	मधुर
34.	वासा	तिक्त, कषाय	लघु, रूक्ष	शीत	कटु
35.	काकोली	मधुर	गुरु	—	—
36.	काकनासिका	मधुर	—	शीत	मधुर
37.	आमलकी	अम्ल प्रधान पंचरस	गुरु, शीत, रूक्ष	शीत	मधुर
38.	वंशलोचन	मधुर, कषाय	रूक्ष, लघु, तीक्ष्ण	शीत	मधुर
39.	चतुर्जात→त्वक्	कटु, तिक्त, मधुर	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
		एला	कटु, मधुर	लघु, रूक्ष	शीत कटु
		पत्र	कटु, मधुर	लघु, तीक्ष्ण	उष्ण कटु
		नाग केशर	तिक्त, कषाय	रूक्ष, लघु, तीक्ष्ण	उष्ण/ अनुष्ण कटु
40.	घृत		मधुर	स्निग्ध	शीत मधुर
41.	तिल तैल	मधुर, तिक्त, कषाय, कटु	स्निग्ध, उष्ण	—	—
42.	शहद	कषाय, मधुर	रूक्ष	शीत	कटु

चिकित्सकीय गुण (Therapeutic properties)

कासश्वासहरश्चैव विशेषेणोपदिश्यते ।
क्षीणक्षतानां वृद्धानां बालानां चाङ्गवर्धनः ॥
स्वरक्षयमुरोरोगं हृद्रोगं वातशोणितम् ।
पिपासां मूत्रशुक्रस्थान् दोषांश्चाप्यपकर्षति ॥
अस्य मात्रां प्रयुञ्जीत योपरुध्यान्न भोजनम् ।
अस्य प्रयोगाच्चयवनः सुवृद्धोऽभूत पुनर्युवा ॥
मेधां स्मृतिं कान्तिमनामयत्वमायुःप्रकर्ष बलमिन्द्रियाणाम् ।
स्त्रीषु प्रहर्षं परमग्निवृद्धिं वर्णप्रसादं पवनानुलोम्यम् ॥
रसायनस्यास्य नरः प्रयोगाल्लभेत जीर्णोऽपि कुटीप्रवेशात् ।
जराकृतं रूपमपास्य सर्वं विभर्ति रूपं नवयौवनस्य ॥
(च.चि. 1/1/70-74)

Indications

1. Kasa - Cough
2. Shwasa - Asthma, respiratory disorders involving difficulty in breathing
3. Kshataksheena - Chest injury
4. Vruddhana Balanam Anga Vardhana- It is good for tissue growth and development of elderly and children.
5. Svarakshaya - Voice problems
6. Uroroga - Chest disorders
7. Hrudroga - Cardiac disorders
8. Vatashonita - Gout
9. Pipasa - Excessive thirst
10. Mutradosha - Urinary tract disorders
11. Shukra Dosha - Semen, sperm anomalies

The dose should be such that it does not disturb the digestion of meals. By the use of this medicine, Chyavana sage who was very old became young once again after consumption of Rasayana.

Administration of this rejuvenation medicine promotes Medha (intelligence), Smruti (memory), Kanti (lustre), Anamayatva (free from diseases), Ayu (healthy long life), Indriya Bala (strength of sense organs), Agni (digestion strength), Varna (skin complexion), Pavana Anuloma (movement of Vata Dosha in its normal direction and easy bowel movement).

By using this therapy according to Kuti Praveshika method (while residing in a cottage), even an old man can shed all his aging related problems and emerge with fresh youthful complexion.

Awasthanusara Uses- Bala, Vruddha and Yuvastha

Matra- 12-24 gm

Anupana- Godugdha

Pathyapathya- Acc. diseases condition

Sevana Kala- Twice daily

Research updates and clinical evidences

- Study done on Chavyanaprasa in children shows that regular consumption of it for a period of three to six months helps to improve immunity, physical fitness, strength, stamina and quality of life as assessed by various parameters. Reference- Pranada T, Dali munthi A, Harahap V. Simanjuntak Y. Peronika E, Karoschi NE, Hasibuan PAZ, Syahputra RA. Situmorang PC and Nurkolis F (2023) phyllanthus emblica : a comprehensive review of its phytochemical composition and pharmacological properties. Front. Pharmacol. 14:1288618.
- Clinical study done 351 subjects showed statistically significant improvement in quality of life as assessed by the Quality of life Enjoyment and Satisfaction Questionnaire when compared to control group. Reference- Gupta A Kumar S Doles. Deshpande S, Deshpande V, Singh S, Sassibhushan V. Evaluation of Chavyanprasa on Healthj and Immunity related Parameters in Healthy children : A Two Arm, Randanized, open labelled prospective, multicenter, clinical study. Anc Sci of life. 2017 Jan-Mar; 36(3):141-150.

Dadimavaleha (Y.R. Jwaratisaradhyaya)

दाडिमादिफलप्रस्थचतुप्रस्थजने पचेत् ।
चतुर्भागकषायेस्मिन्शर्कराप्रस्थमेव च ॥
नागरं पिप्पली मूलं कणा धान्यक दीप्यकं ।
जातीफलं जातीपत्रं मरिचं जीरकं तुगा ॥

विजया निम्बपत्रं समंगं कूट शाल्मली।
अरल्वतिविषापाडालवगंच पृथक पलं॥
घृतस्य मधुन प्रस्थं सर्वलेहं विपाचयेत्।
(यो.र. 156-159)

Ingredients and method of preparation

Dadima -768 gm, water- 30721 ml, reduce 1/4th than add Sharkara 768gm, Shunthi, Pippalimula, Maricha, Dhanyaka, Jatiphala, Jatipatra Jiraka, Tuga, Vijaya, Nimba Patra, Samanga, Shalmali, Aralu, Ativisha, Patha, Lavanga each 48gm, Madhu 768 gm and Ghruta 768gm. Take Dadima add 4 parts of water and reduce 1/4th. Then add other ingredients one by one mix well. Allow the mixture to cool down and then add Madhu last. Store in airtight container.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	दाडिम	मधुर, अम्ल, कषाय	लघु, रूक्ष	अनुष्ण	मधुर/ अम्ल
2.	शुण्ठी	कटु	गुरु, रूक्ष, तीक्ष्ण	उष्ण	मधुर
3.	पिप्पली	कटु	लघु, तीक्ष्ण, स्निग्ध	उष्ण	मधुर
4.	पिप्पलीमूल	कटु	लघु, रूक्ष	उष्ण	कटु
5.	धान्यक	कषाय, तिक्त, मधुर, कटु	लघु, स्निग्ध	उष्ण	मधुर
6.	अजमोदा	कटु, तिक्त	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
7.	जायफल	तिक्त कटु	लघु, तीक्ष्ण	उष्ण	कटु
8.	जावित्री	तिक्त कटु	लघु, तीक्ष्ण	उष्ण	कटु
9.	जीरक	कटु	लघु, रूक्ष	उष्ण	कटु
10.	निम्ब	तिक्त कषाय	लघु, रूक्ष	शीत	कटु
11.	समंगा	कषाय, तिक्त	लघु, रूक्ष	शीत	कटु
12.	शाल्मली	कषाय/मधुर	लघु स्निग्ध	शीत	मधुर
13.	अरलू	तिक्त, कषाय	रूक्ष	शीत	कटु
14.	अतिविषा	कटु तिक्त	लघु, रूक्ष	उष्ण	कटु
15.	पाठा	तिक्त	लघु, तीक्ष्ण	उष्ण	कटु
16.	लवंग	तिक्त कटु	लघु, स्निग्ध	शीत	कटु
17.	मरिच	कटु	लघु, तीक्ष्ण, सूक्ष्म	उष्ण	कटु
18.	भंगा	तिक्त	लघु, तीक्ष्ण, व्यवायी	उष्ण	कटु
19.	घृत	मधुर	स्निग्ध	शीत	मधुर
20.	मधु	कषाय, मधुर	रूक्ष	शीत	कटु

चिकित्सकीय गुण (Therapeutic properties)

दाडिम्वलेहकंनाम ज्वरातिसारनाशनं॥
आमरक्तचामशूलंमान्दयशोफक्षयापहं।
धातुलीनं धातुगतमश्विभ्यांनिर्मितं पुरा॥
(यो.र. 156-160)

Indications

Jwaratisara, Amajanya Shula, Shopha, Kshaya Nashaka.

Matra- 6 -12 gm

Anupana- Water

Pathyapathya- Acc. to disease condition

Sevana Kala- 2- 3 times

Research updates and clinical evidences

Single case study done on Dadimavaleha in Garbhini Pandu shows that after treatment of 3 months the Hb level gets increased by 1.3 gm/dl. This Avaleha was given in syrup form at a dose of 20 ml BID. Reference- Vd Pushkaraj, S Valvi, Vd. Rekha C. Kuwar, Efficacy of Dadima Avaleha in the management of Garbhini Pandu with special reference to Amlemia in pregnancy; International Journal of Scientific Research; 7(9): Sep 2018.

Panchagavya Ghrita (AFI Part I Page 90)

गोमय स्वरस क्षीर दधिमूत्रैः शृतं हविः।
(अ.ह्.उ. 7/18)

Ingredients

Gomaya Swarasa, Go Dugdha, Go Dadhi, Go Mutra each 3072 ml and Go Ghruta 768 gm.

Chemical/phytochemical composition

गोघृत	गोशकृत	गोमूत्र	गोदुग्ध	दधि
Vitamin A Vitamin D,E,K Phospholipids Free falty acids Sterols Butric, Carpic Oleic, Myristic Acid etc.	Nitrogen Potassium and organic humans etc.	24 types of salt water 95%, urea 2.5% minerals salt, hormones and enzymes 2.5% It contain Fe, Ca, P, aminoacids cytokines etc.	High moisture carotene, thiamene riboflavin fat etc.	Beneficial bacteria amino acids peptides vitamins minerals etc.

Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	गोघृत	मधुर	स्निग्ध, मृदु, श्लक्षण, गुरु	शीत	मधुर
2.	गोदुग्ध	मधुर	गुरु, स्निग्ध	शीत	मधुर
3.	गोमूत्र	कटु, लवण, समधुर	तीक्ष्ण, उष्ण, लखु	—	कटु (प्रियव्रत शर्मा)
4.	दधि	मधुर	स्निग्ध	उष्ण	मधुर

चिकित्सकीय गुण (Therapeutic properties)

अपस्मारज्वरोन्मादकामलान्तरकरं पिबेत्॥

(अ.हृ.उ. 7/18)

Indications

Apasmara, Jwara, Unmada, Kamalahara

Matra - 12gm

Anupana - Ushna Dugdha and Jala

Pathyapathya - Twice daily

Research updates and clinical evidences

- Study on Panchagavya Ghrita in animal models to assess its nootropic activity shows that Panchagavya Ghrita have significant memory enhancement action in MWM test. The test drug was administered in three dose levels as 2.5 g/kg, 5 gm/kg and 10 gm/kg. Reference- Pandey A. Pawar MS. Assessment of nootropic activity of Panchagavya ghrita in animal models. International Journal of Scientific and Research Publication 5(8),1-5. 2015.
- Clinical trial done on Panchagavya Ghrita to evaluate its effect in Bal Apasmara in 30 patients shows that it has statistically significant result in frequency and duration of convulsion. The study period was 12 months. No complications and side effects were seen during the study. Reference- Jagtap Amit R. Dandekar AS. A clinical evaluation of Panchagavya Ghrita in Bal Apasmara (Epilepsy in Pediatric Age Group). Ayushdhara (Internet). 2015 Dec 8, 2(4).

Brahmi Ghrita (AFI Part I Page 93)

द्वौ प्रस्थौ स्वरसाद् ब्राह्मया घृतप्रस्थं च साधितम्।
व्योषश्यामात्रिवृत्त दन्तीशङ्खपुष्पीनृपद्रुभैः॥
ससप्तला कृमिहरैःकल्कितैरक्षसाम्मितैः।
पलवृद्ध्या प्रपुञ्जीत परं मात्रा चतुष्पलम्॥

(अ.हृ.उ. 6/23-25)

Ingredients

Brahmi Swarsa 1.536 lt. Ghruta 768gm, Shunthi, Maricha, Pippali, Trivruta, Danti, Shankapuspi, Aragavadha, Saptala and Vidanga each 12 gm.

Chemical/phytochemical composition

Tannin, Phlobatannin, Saponin, Steroid, Flavonoid, Cardiac Glycoside, Phenol, Carbohydrate and Alkaloid

Pharmacodynamics and pharmacokinetics

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	ब्राह्मी	तिक्त कषाय	लघु	शीत	मधुर
2.	शुण्ठी	कटु	गुरु, रूक्ष, तीक्ष्ण	उष्ण	मधुर
3.	मरिच	कटु	लघु, तीक्ष्ण	उष्ण	कटु
4.	पिप्पली	कटु	लघु, तीक्ष्ण, स्निग्ध	उष्ण	मधुर
5.	त्रिवृत (श्वेत त्रिवृत)	तिक्त, कटु	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
6.	दन्ती	कटु	गुरु, तीक्ष्ण	उष्ण	कटु
7.	शंखपुष्पी	तिक्त	स्निग्ध, पिच्छिल	शीत	मधुर
8.	आरग्वध	मधुर	मृदु, गुरु, स्निग्ध	शीत	मधुर
9.	सप्तला	तिक्त	लघु, रूक्ष	शीत	कटु
10.	विडंग	कटु, कषाय	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
11.	श्यामा	तिक्त कटु	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु

चिकित्सकीय गुण (Therapeutic properties)

उन्माद कुष्ठापस्मारहरं वन्ध्यासुतप्रदम्।
वाक्स्वरस्मृतिमेधाकृद् धन्यं ब्राहमीघृतं स्मृतम्॥

(अ.हृ.उ. 6/23-25)

Apsmara, Unmada, Vandhatva, Kushta, Vaka Swara Bhanga, Sruti Kshaya, Daublya Nashaka.

Matra- 12 gm

Anupana-Ushna Dugdha, Jala

Pathyapathya- Acc. disease condition

Sevana Kala- Twice daily

Research updates and clinical evidences

- Animal study done on Brahmi Ghrita to see its effect on learining and memory shows that it enhances learning and memory as analogous to standard drug (Piractem) in normal rats. It is reported that prolonged use of Bacopa monneri (L.) Pennell causes elevation of cerebral glutanic acid and transient increase in gamma aminobutanic acid, which may be helpful in process of learning. Reference- Yadav KD, Reddy KR, Kumar V. Beneficial effect of Brahmi Ghrita on learning and Memory in normal rat. Ayu. 2014. Jul-Sep; 35(3):325-29.
- Randomized placebo controlled clinical trial drone on Brahmi Ghrita in 20 completed patients to evaluate its anti depressant and anti psychoactive effect shows that it has moderate improvement in 50% patient while 35% mild improvement. The total effect was statistically highly significant. Reference- Deole Yogesh, Chandola HM. A clinical study on effect of Brahmi Ghrita on Depression. Ayu. 29(4):207-214 Oct, Dec 2008.

Narayana Taila (AFI Part I Page 138)

बिल्वाग्निमन्थश्योनाकपाटलापारिभद्रकम् ।
प्रसारण्यश्वगन्धा च वृहती कण्टकारिका॥
बला चातिबला चैव श्वदंष्ट्रा सपुनर्नवा।
एषां दशपलान् भगांश्चतुर्द्रोणेऽम्भसः पचेतः॥
पादशेषं परिस्त्राव्य तैलपात्रं प्रदापयेत्।
शतपुष्पा देवदारु मांसी शैलेयकं वचा॥
चन्दनं तगरं कुष्ठमेला पर्णी चतुष्टयम्।
रास्ना तुरगगन्धा च सैन्धवं सपुनर्नवम्॥
एषां द्विपलिकान् भागान् पेषपित्वा विनिक्षिपेत्।
शतावरीरसञ्चैव तैल तुल्यं प्रदापयेत्॥
आजं वा यदि वा गव्यं क्षीरं दद्याच्चतुर्गुणम्।

(भै.र. 26/332-336)

Ingredients

Bilva, Agnimantha, Shyonaka, Patala, Paribhadra, Prasarini, Ashwagandha, Brihati, Kantakari, Bala, Atibala, Gokshura, Punarnava each 10 Pala and water 4 Drona, Tila Taila- 1 Patra (1 Adhaka). Kalka Dravya Shatapuspa, Devadaru

Jatamamsi, Shaileyaka, Vacha, Chandana, Tagara, Kushta, Ela, Prisniparni, Shaliparni, Mudgaparni, Masha Parni, Rasna, Ashwagandha, Saindhava Lavana, Punarnava each two Pala, Drava Dravya-Shatavari Swarasa 1 Patra and Gokshira or Aja Kshira 4 Patra.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	विल्व	कषाय तिक्त	लघु, रूक्ष	उष्ण	कटु
2.	अग्निमन्थ	तिक्त, कषाय, कटु, मधुर	रूक्ष, लघु	उष्ण	कटु
3.	श्योनाक	तिक्त, कषाय, मधुर	रूक्ष, लघु	उष्ण	कटु
4.	पाटला	तिक्त, कषाय	रूक्ष, लघु	अनुष्ण	कटु
5.	पारिभद्र	कटु, तिक्त	रूक्ष, लघु	उष्ण	कटु
6.	प्रसारिणी	तिक्त	गुरु	उष्ण	कटु
7.	अश्वगन्धा	तिक्त, कषाय, कटु	लघु, स्निग्ध	उष्ण	कटु
8.	बृहती	कटु, तिक्त	लघु, रूक्ष	उष्ण	कटु
9.	कण्टकारी	कटु, तिक्त	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
10.	बला	मधुर	स्निग्ध, लघु	शीत	मधुर
11.	अतिबला	मधुर	स्निग्ध, लघु	शीत	मधुर
12.	गोक्षुर	मधुर	गुरु, स्निग्ध	शीत	मधुर
13.	पुनर्नवा	कषाय, मधुर, तिक्त	लघु, रूक्ष	उष्ण	कटु
14.	शतपुष्पा	तिक्त, कटु	लघु, तीक्ष्ण	उष्ण	कटु
15.	देवदारु	तिक्त, कटु, कषाय	लघु, रूक्ष	उष्ण	कटु
16.	जटामांसी	तिक्त, कषाय, मधुर	लघु, स्निग्ध	शीत	कटु
17.	सैरेयक	तिक्त, मधुर	स्निग्ध, लघु	उष्ण	कटु
18.	वच	कटु, तिक्त	लघु, तीक्ष्ण	उष्ण	कटु
19.	रक्तचन्दन	तिक्त, मधुर	गुरु, रूक्ष	शीत	कटु
20.	तगर	तिक्त, कटु, कषाय	लघु स्निग्ध	उष्ण	कटु
21.	कुष्ठ	तिक्त, कटु, मधुर	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
22.	एला	कटु, मधुर	लघु, रूक्ष	शीत	कटु
23.	शालपर्णी	मधुर, तिक्त	स्निग्ध, गुरु	उष्ण	मधुर
24.	पृश्निपर्णी	मधुर, कटु	लघु, स्निग्ध	उष्ण	मधुर
25.	माषपर्णी	मधुर तिक्त	लघु, स्निग्ध	शीत	मधुर
26.	मुद्गपर्णी	मधुर	लघु, रूक्ष	शीत	मधुर
27.	रास्ना	तिक्त	गुरू	उष्ण	कटु
28.	तुरगगन्धा	तिक्त, कषाय, कटु	स्निग्ध, लघु	उष्ण	मधुर
29.	पुनर्नवा	कटु, कषाय, मधुर, तिक्त	लघु, रूक्ष	उष्ण	कटु
30.	शतावरी	मधुर, तिक्त	गुरु, स्निगध	शीत	मधुर
31.	सैन्धव लवण	लवण	स्निग्ध	नोष्ण	—
32.	गोदुग्ध	मधुर	मृदु, स्निग्ध, गुरु आदि	शीत	मधुर
33.	तिल तैल	मधुर, तिक्त, कषाय, कटु	उष्ण, स्निग्ध	—	—

चिकित्सकीय गुण (Therapeutic properties)

पाने वस्तौ तथाऽभ्यङ्गे भोज्ये चैव प्रशस्यते।
अश्वो वा वातसम्भग्नौ गजो वा यदि वानरः।
पंड़गुश्च पीठसर्पी च तैलेनानेन सिद्धयति॥
अधोभागे ये च वाताः शिरोमध्यगताश्च ये।
मन्यास्तम्भे हनुस्तम्भे दन्तरोगे गलग्रहे॥
यस्य शुष्यति चैकाङ्गं गतिर्यस्य च विहवला।
क्षीणेन्द्रियाः क्षीणशुक्रा ज्वरक्षीणाश्चये नरः॥
बधिरा लल्ल जिह्वाश्च मन्दमेधस एव च।
अल्पप्रजा च या नारी या च गर्भ न विन्दति॥
वातार्तौ वृषणौ येषामन्त्रवृद्धिश्च दारूणा।
एतत्तैलवरं तेषां नाम्नां नारायणंमतम्॥

(भै.र. 26/337-342)

Indications

Panguvata, Pitha Sarpi, Adhobhagavata, Shiramadhyagata Vata, Manyastambha, Hani Stambha, danta Roga, Galagraha, Shosha, Kshinindriya, Kshina Shukra, Jwara Kshaya, Badhira, lallajihva, Mandamedha, Alpa PrajaN Nari, Vrushan Vata and Antra Vruddhi.

Matra- 6 gm for Pana, for Abhyanga and Basti and Nasya depended on requirement

Anupana- Ushnajala and Dugdha

Pathyapathya- Acc. disease condition

Sevana Kala- Abhyanga, Basti Nasya Prayoga depend of condition

Research updates and clinical evidences

Clinical study done on Narayan Taila on Anovulatory factor in which drug was administered by Nasya and Matra Basti. In this study patients were divided into two groups. Group (n=12) administered drug through Nasya while in Group B (n=12) through Matra Basti. After the completion of study Matra Basti should better results than Nasya syrup. Reference- Donga KR, Donga SB, Dei LP. Role of Nasya and Matra Basti win Narayan Taila on anovulatory factor. Ayu. 2013 Jan; 34(1):8+-5.

Neelibhringadi Taila (AFI Part I Page 139)

नीली भृङ्गलताशतक्रतुलता धात्री फलानां रसे।
क्षीरैराजकनालिकेरमहिषी धेनूदभवैस्साधितम्॥
तैलं तत्पयसैव पिष्टलुलितैर्यष्टयाहवगुञ्जानैः।
केशान् सञ्जनयेत्तलेऽपि करयोरास्तामकेशं शिरः॥

(सहस्रयोग, तैल. 38)

Ingredients

Nili Swarasa, Bhringaraja Swarasa, Shatakratulata, Amalaki, Ajakshira, Narikela Kshira, Mahisha Kshira, Go Dugdha, Tila Taila each 768gm and Yashti, Gunja Mula and Daruharidra 32gm each.

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	नीली	तिक्त	लघु, रूक्ष	उष्ण	कटु
2.	भृङ्गराज	कटु	तीक्ष्ण, रूक्ष	उष्ण	कटु
3.	शतक्रतुलता	तिक्त	सर, लघु	उष्ण	कटु
4.	आमलकी	अम्ल प्रधान पंचरस	गुरु, शीत, रूक्ष	शीत	मधुर
5.	मधुमष्टी	मधुर	गुरू, स्निग्ध	शीत	मधुर
6.	गुञ्जा	मधुर, तिक्त	रूक्ष, शीत	उष्ण	मधुर
7.	रसाञ्जन (दारु हरिद्रा)	कटु, तिक्त	रूक्ष	उष्ण	कटु
8.	तिल तैल	कटु, तिक्त, कषाय, मधुर	गुरु, स्निग्ध	उष्ण	कटु

Indigofera tectoria has anti-inflammatory, antioxidant, antihelminthic etc. Pharmacological activity, Amalaki is also having antioxidant property, Madhuyasti is having antifungal, antioxidant etc. activity. By means of these property Neeli bhrigyadi Taila may works as Keshya.

चिकित्सकीय गुण (Therapeutic properties)

Keshaapata, Palitya

Matra- depend on condition

Prayoga Kala- depend on condition

Panchaguna Taila (AFI-Part II, Page 145)

Ingredients

Haritaki, Amalaki, Bhibhitaki, Nimba Patra, Nirgundi Patra. Water, Tila Taila, Madhuchcchisthta, Sarala, Shila Rasa. Rala, Shuddha Guggulu, Karpura, Tarpina Taila, Nilagiri Taila and Kejoputi Taila

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	हरीतकी	पंचरस कषाय प्रधान	लघु रूक्ष	उष्ण	मधुर
2.	विभीतकी	कषाय	रूक्ष, लघु	उष्ण	मधुर
3.	आमलकी	पंचरस अम्ल प्रधान	गुरु, शीत, रूक्ष	शीत	मधुर
4.	निम्ब	तिक्त कषाय	लघु, रूक्ष	शीत	कटु

5.	निर्गुण्डी	कटु, तिक्त	लघु, रूक्ष	उष्ण	कटु
6.	सरल	मधुर, तिक्त, कषाय	लघु, स्निग्ध, तीक्ष्ण	उष्ण	कटु
7.	शिला निर्यास	मधुर, कटु	स्निग्ध	उष्ण	—
8.	राल	तिक्त, कषाय	गुरु, स्निग्ध	शीत	—
9.	गुग्गुलु	तिक्त, कटु	लघु, रूक्ष, सर, सूक्ष्म	उष्ण	कटु
10.	कर्पूर	तिक्त, मधुर, कटु	लघु, रूक्ष	शीत	कटु
11.	तिल तैल	मधुर, कटु, तिक्त, कषाय	उष्ण, स्निग्ध	—	—

चिकित्सकीय गुण (Therapeutic properties)

Sandhigata Vata, Karna Shula, Vranaopachara,

Matra- eternal use

Aravindasava (AFI Part I page 7)

अरविन्दमुशीरञ्च काश्मर्री नीलमुत्पलम्।
मञ्जिष्ठैला बलामांसीरम्बुदं सारिवां शिवम्॥
विभीतक वचाधात्रीः शटीं श्यामां सनीलिनीम्।
पटोलं पर्पटं पार्थं मधूकं मधुकं मुराम्॥
पलमानेन संग्रह्य द्राक्षायाः पल विंशतिम्।
धातकीं षोडशपलां जल द्रोणद्वये क्षिपेत्॥
शर्करायास्तुलां तत्र तुलार्द्धं माक्षिकस्य च।
मासं संस्थापयेद् भाण्डे मृत्तिकापरिनिर्मिते॥
बालानां सर्वरोगघ्नो बलपुष्ट्यग्निवर्द्धनः।
अरविन्दासवः प्रोक्त आयुष्यो ग्रहदोषहृत्॥
(भै.र.बाल. 71/ 162-166)

Ingredients and method of preparation

- Draksha - 88 gm
- Dhataki Puspaha - 640 gm
- Sugar- 4 kgs
- Madhu - 02 kgs
- Water - 24.48 liters

Prakshepaka Dravya-Aravinda, Ushira, Gambhari, Nilopala, Manjistha, Ela, Balamula, Jatamasi, Musta, Sariba, Bibhitaki, Vacha, Amalaki, Shati, Haritaki, Priyangu Phala, Nilimula, Patola Patra, Parpata, Arjuna Twaka, Madhuka, Yastimadhu, Mura each 40gms

Chemical/phytochemical composition and Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	रस	गुण	वीर्य	विपाक
1.	अरविन्द (कमल)	कषाय, मधुर, तिक्त	लघु, स्निग्ध, पिच्छिल	शीत	मधुर
2.	उशीर	तिक्त, मधुर	रूक्ष, लघु	शीत	कटु
3.	काश्मरी	तिक्त, कषाय, मधुर	गुरु	उष्ण	कटु
4.	उत्पल	मधुर, कषाय तिक्त	लघु, स्निग्ध, पिच्छिल	शीत	मधुर
5.	मञ्जिष्ठा	तिक्त, मधुर	गुरु, रूक्ष	उष्ण	कटु
6.	एला	कटु, मधुर	लघु, रूक्ष	शीत	कटु
7.	वला	मधुर	लघु, स्निग्ध	शीत	मधुर
8.	जटामांसी	तिक्त, कषाय, मधुर	लघु, स्निग्ध	शीत	कटु
9.	मुस्ता	तिक्त, कटु कषाय	लघु, रूक्ष	शीत	कटु
10.	श्वेत सारिवा	मधुर, तिक्त	गुरु, स्निग्ध	शीत	मधुर
11.	हरीतकी	पंचरस कषाय प्रधान	लघु, रूक्ष	उष्ण	मधुर
12.	विभीतकी	कषाय	रूक्ष, लघु	उष्ण	मधुर

13.	वचा	कटु, तिक्त	लघु, तीक्ष्ण, रूक्ष	उष्ण	कटु
14.	आमलकी	पंचरस अम्ल प्रधान	गुरु, शीत, रूक्ष	शीत	मधुर
15.	शटी	कटु, तिक्त, कषाय	लघु, तीक्ष्ण	उष्ण	कटु
16.	त्रिवृत	तिक्त, कटु	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
17.	नीली	तिक्त	लघु, रूक्ष	उष्ण	कटु
18.	पटोल	तिक्त, कटु	लघु, रूक्ष	उष्ण	कटु
19.	पर्पट	तिक्त	लघु	शीत	कटु
20.	मधुक	मधुर, कषाय	गुरु, स्निग्ध	शीत	मधुर
21.	मधुयष्टी	मधुर	गुरु, स्निग्ध	शीत	मधुर
22.	मुरा	तिक्त	गुरु, रूक्ष	शीत	कटु
23.	अर्जुन	कषाय	रूक्ष, लघु	शीत	कटु
24.	द्राक्षा	मधुर	स्निग्ध, गुरु	शीत	मधुर
25.	धातकी	कषाय	लघु, रूक्ष	शीत	कटु
26.	शहद	कषाय, मधुर	रूक्ष	शीत	कटु

चिकित्सकीय गुण (Therapeutic properties)

बालानां सर्वरोगघ्नो बलपुष्टयग्निवर्द्धनः।
अरविन्दासवः प्रोक्तः आयुष्यो ग्रहदोषहृत्॥
(भै.र. बाल/165)

Indications

All types of Bala Roga, and pharmacological action like Balakara, Pustikara, Agnivardhaka, Ayusha and Graha Doshahara.

Matra- 3 to 12 ml

Anupana- Jala

Sevana Kala- After food

Ashokarishta (AFI Part I page 8)

अशोकस्य तुलामेकाञ्चतुर्द्रोणे जले पचेत्।
पादशेषे रसे पूते शीते पलशतद्वयम्॥
दद्याद् गुडस्य धातक्याः पलषोडशिकं मतम्।
अजाजी मुस्तकं शुण्ठी दार्व्युत्पलफलत्रिकम्॥
आम्रास्थि जीरकं वासां चन्दनञ्च विनिक्षिपेत।
चूर्णयित्वा पलांशेन ततो भाण्डे निधापयेत॥
(भै.र.स्त्री 114-116)

Ingredients

Kwatha Dravyas- Ashoka Twaka and water

Sandhana Dravya- Guda and Dhataki Pushpa

Prakshepaka Dravya- Krishna Jiraka, Musta, Shunthi, Daruharidra, Utapala, Amalaki, Haritaki, Vibhitaki, Amarasthi Majja, Jiraka, Vasa and Shweta Chandana.

Method of preparation

Prepare the Kwatha of Kwatha Dravya reduced to 1/4th by boiling. Add the Sadhana Dravya and other Prakshepaka Dravya. Close mouth properly and kept for fermentation process.

Chemical/phytochemical composition

Bark of S. asoca is found reported to contain flavonoids, tannins, steroids, glcosides, steroidal glycosides and volatile oils

Pharmacodynamics and pharmacokinetics

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	अशोक	कषाय, तिक्त	लघु, रूक्ष	शीत	कटु
2.	धाय पुष्प	कषाय	लघु, रूक्ष	शीत	कटु
3.	श्वेत जीरक	कटु	लघु, रूक्ष	उष्ण	कटु
4.	मुस्त	तिक्त, कटु, कषाय	लघु, रूक्ष	शीत	कटु
5.	शुण्ठी	कटु	गुरु, रूक्ष	उष्ण	मधुर
6.	दारुहरिद्रा	तिक्त, कषाय	लघु, रूक्ष	उष्ण	कटु
7.	उत्पल	मधुर, कषाय,	लघु, स्निग्ध, तिक्त,पिच्छिल	शीत	मधुर
8.	हरीतकी	पंचरस कषाय प्रधान	लघु, रूक्ष	उष्ण	मधुर
9.	विभीतकी	कषाय	रूक्ष, लघु	उष्ण	मधुर
10.	आमलकी	पंचरस अम्ल प्रधान	गुरु, शीत, रूक्ष	शीत	मधुर
11.	आम्र	कषाय	लघु	शीत	कटु
12.	श्वेत जीरक	कटु	लघु, रूक्ष	उष्ण	कटु
13.	वासा	तिक्त, कषाय	लघु, रूक्ष	शीत	कटु
14.	श्वेत चन्दन	तिक्त, मधुर	रूक्ष, गुरू	शीत	कटु
15.	गुड़	मधुर, क्षार	स्निग्ध	—	—

चिकित्सकीय गुण (Therapeutic properties)

मासादूदर्ध्वञ्च पीत्वैनमसृग्दररूजां जयेत्।
ज्वरञ्च रक्तपित्तार्शो मन्दाग्नित्वरोपकम्॥
मेहशोथारुचिहरस्त्वशोकारिष्टसंज्ञितः॥

(भै.र.स्त्री/117)

Indications

Asrigdara Ruja, Jwara, Raktapitta, Arsha, Mandagni, Arochaka, Meha and Shotha.

Matra- 12-24 ml

Anupana- Jala

Sevana Kala- After Food

Research updates and clinical evidences

Clinical study done in the management of menopausal syndrome with Ashokarishta. Ashwagandha churna and proval pishti show better result in both somatic as well as psychological complaints in women with mild to moderate symptoms of menopausal syndrome the study was done in total 51 patients. Reference- Modi MB. Donga SB, Dei L. Clinical evaluation of Ashokarishta, Ashwagandha Churna and Praval Pishti in the management of menopausal syndrome. Ayu. 2012. Oct; 33(4):511-6.

Kumaryasava (AFI Part I page 10)

सुपक्व रस सुंशुद्धं कुमार्याः पत्रमाहरेत्।
यत्नेन रसमादाय पात्रे पाषाण मृन्मये॥
द्रोणे गुडतुलां दत्त्वा घृत भाण्डे निधापयेत्।
माक्षिकं पक्वलोहं च तास्मिन्नर्धतुलां क्षिपेत्॥
कटुत्रिकं लवङ्गं च चातुर्जातकमेव च॥
चित्रकं पिप्पली मूलं विडङ्गं गजपिप्पली।
चविकं हपुषा धान्यं क्रमुकं कटुरोहिणी॥
मुस्ता फलत्रिकं रास्ना देवदारु निशाद्वायम्।
मूर्वा मधुरसा दन्तीमूल पुष्कर सम्भवम्॥
शतपुष्पा हिङ्गुपत्री आकल्लकमुटिङ्गणम्।
पुनर्नवाद्यं लोध्रं धातु माक्षिक मेव च॥
एषां चार्धपलं दत्त्वा धातक्यास्तु पलाष्टकम्।
पलं चार्धपलं चैव पलद्वयमुदाहम्॥

(शा.म. 10/18-24)

Ingredients

Kumari, Guda, Haritaki, Madhu, Dhataki, Jatiphala, Lavanga, Kankola, Kababaka, Jatamasi, Chavya, Eranda, Jatiphala, Karkatashringi, Bibhitaki, Pushkara, Tamra Bhasma, Lauha Bhasma.

Chemical/phytochemical composition

Copper and Iron

Pharmacodynamics and pharmacokinetics

क्र.सं.	घटक द्रव्य	योग में मात्रा	रस	गुण	वीर्य	विपाक
1.	कुमारी (स्वरस)	12.288 ली.	तिक्त	गुरू, स्निग्ध, पिच्छिल	शीत	कटु
2.	गुड़	4.8 किग्रा.	मधुर, क्षारीय	स्निग्ध	—	—
3.	मधु	2.4 किग्रा.	कषाय, मधुर	रूक्ष	शीत 11	कटु
4.	लौह भस्म	24 ग्रा	तिक्त, कषाय	रूक्ष, गुरु	शीत	मधुर
5.	शुण्ठी	24 ग्रा	कटु	गुरु, तीक्ष्ण, रूक्ष	उष्ण	मधुर
6.	मरिच	24 ग्रा	कटु	लघु, तीक्ष्ण	उष्ण	कटु
7.	पिप्पली	24 ग्रा	कटु	लघु, तीक्ष्ण, स्निग्ध	उष्ण	मधुर
8.	लवंग	24 ग्रा.	तिक्त, कटु	लघु, स्निग्ध	शीत	कटु
9.	त्वक्	24 ग्रा	कटु, तिक्त मधुर	लघु, तीक्ष्ण, तीक्ष्ण	उष्ण	कटु
10.	एला	24 ग्रा	कटु, मधुर	लघु, रूक्ष	शीत	कटु
11.	पत्र	24 ग्रा	कटु, मधुर	लघु, तीक्ष्ण	उष्ण	कटु
12.	नागकेशर	24 ग्रा.	तिक्त कषाय	रूक्ष, तीक्ष्ण, लघु	उष्ण/अनुष्ण	कटु
13.	चित्रक	24 ग्रा	कटु	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
14.	पिप्पलीमूल	24 ग्रा	कटु	लघु, रूक्ष	उष्ण	कटु
15.	विडंग	24 ग्रा	कटु, कषाय	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
16.	गजपिप्पली	24 ग्रा	कटु	लघु, रूक्ष	उष्ण	कटु
17.	चव्य	24 ग्रा.	कटु	लघु, रूक्ष	उष्ण	कटु
18.	हपुषा	24 ग्रा	कटु, तिक्त	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
19.	धान्यक	24 ग्रा	कषाय, तिक्त,	लघु, स्निग्ध, मधुर	उष्ण	मधुर
20.	क्रमुक	24 ग्रा	कषाय, मधुर	गुरु, रूक्ष, विकाशी	शीत	कटु
21.	कटुकी	24 ग्रा	तिक्त	रूक्ष, लघु	शीत	कटु
22.	मुस्ता	24 ग्रा.	तिक्त, कटु,	लघु, रूक्ष, कषाय	शीत	कटु
23.	हरीतकी	24 ग्रा	कषाय प्रधान पंच	लघु, रूक्ष, रस	उष्ण	मधुर
24.	विभीतकी	24 ग्रा	कषाय	लघु, रूक्ष	उष्ण	मधुर
25.	आमलकी	24 ग्रा	अम्ल प्रधान	गुरु, शीत, रूक्ष, पंच रस	शीत	मधुर
26.	रास्ना	24 ग्रा	तिक्त	गुरु	उष्ण	कटु
27.	देवदारु	24 ग्रा.	तिक्त कटु कषाय	रूक्ष लघु	उष्ण	कटु
28.	हरिद्रा	24 ग्राम	तिक्त, कटु	रूक्ष, लघु	उष्ण	कटु
29.	दारूहरिद्रा	24 ग्रा	तिक्त कषाय	लघुरूक्ष	उष्ण	कटु
30.	मूर्वा	24 ग्रा.	तिक्त कषाय	गुरु, रूक्ष	उष्ण	कटु

31.	मधुयष्टी	24 ग्रा.	मधुर	गुरु स्निग्ध	शीत	मधुर
32.	दन्ती	24 ग्रा	कटु	गुरु, तीक्ष्ण	उष्ण	कटु
33.	पुष्करमूल	24 ग्रा	तिक्त, कटु	लघु, तीक्ष्ण	उष्ण	कटु
34.	वला	24 ग्रा	मधुर	स्निग्ध, लघु	शीत	मधुर
35.	अतिबला	24 ग्रा	मधुर	स्निग्ध लघु	शीत	मधुर
36.	कपिकच्छू	24 ग्रा.	मधुर, तिक्त	गुरु, स्निग्ध	उष्ण	मधुर
37.	गोक्षुर	24 ग्रा	मधुर	गुरु स्निग्ध	शीत	मधुर
38.	शतपुष्पा	24 ग्रा	तिक्त, कटु	लघु, तीक्ष्ण, रूक्ष	उष्ण	कटु
39.	हिंगुपत्री	24 ग्रा	कटु, तिक्त	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
40.	अकरकाराभ	24 ग्रा	कटु	रूक्ष, तीक्ष्ण	उष्ण	कटु
41.	उटंगन	24 ग्रा.	मधुर, तिक्त	गुरु, स्निग्ध	उष्ण	मधुर
42.	श्वेत पुनर्नवा	24 ग्रा	मधुर, तिक्त,	लघु, रूक्ष, कषाय	उष्ण	कटु
43.	रक्त पुनर्नवा	24 ग्रा.	मधुर, तिक्त,	लघु, रूक्ष, कषाय	शीत	कटु
44.	लोध्र	24 ग्रा	कषाय, तिक्त	लघु, रूक्ष	शीत	कटु
45.	माक्षिक भस्म	24 ग्रा.	मधुर	लघु	शीत	कटु
46.	धातकी	384 ग्रा.	कषाय	लघु, रूक्ष	शीत	कटु

चिकित्सकीय गुण (Therapeutic properties)

वपुर्वयः प्रमाणेन बलवर्णाग्निदीपनम्॥
बृंहणं रोचनं वृष्यं पक्तिशूलनिवारणम्।
अष्टावुदरजान् रोगान् क्षयमुग्रं च नाशयेत्॥
विंशति मेहजान् रोगानुदावर्तमस्मृतिम्।
मूत्रकृच्छ्रमपस्मारं शुक्रदोषं तथाश्मरीम्॥
कृमिज रक्तपित्तं च नाशयेत् तु न संशयः।

(शा.म. 10/25-27)

Indications

Agnimandya, Paktishula, Parinama Shula, Udavarta, Mutrakruccha, Prameha, Raktapitta, Apasmara, Shukradosha, Krimiroga, Smrutikshaya, Daurbalya, Udara, Karshya, Kshaya, Aruchi, Vaivarnya.

Matra- 12- 24 ml

Anupana- Water

Research updates and clinical evidences

Clinical study done on Kumaryasava along with Tankana in the management of Anartava in poly cystic ovary disease shows significant result in subjective parameters. This study was done in total 30 patients divided in two groups. Kumarayasava was given in a dose of 15 ml mixed with 1 Ratti of Tankana Bhasma. This dose was given for a period of two months. Reference- Devi B.V. Asokan. Randomized controlled study on Kumarayasava and Tankana Bhasma in Anaatava in Polycystic ovary disease; GIRA; 11(6):June 2022:131-134.

Kutajarishta (AFI Part I page 10)

तुलां कुटज मूलस्य मृद्वीकार्द्धतुलां तथा।
मधूक पुष्प काश्मर्योर्भागान् दशपलोन्मितान्॥
चतुर्द्रोणेऽम्भसः पक्त्वा द्रोणञ्चैवावशेषितम्।
धातक्या विंशतिपलं गुडस्य च तुलां क्षिपेत्॥
मासमात्रं स्थितो भाण्डे कुटजारिष्टसंज्ञितः।

(भै.र.अतीसार 97-98)

Ingredients- Kutaja Mula, Draksha, Madhuaka Puspha, Gambhari, Guda, Dhataki.

Chemical/phytochemical composition

Holarrfine, Kurchamide, Kurchemine, Holarrhidine

Pharmacodynamics and pharmacokinetics

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	कुटज	तिक्त कषाय	लघु रूक्ष	शीत	कटु
2.	गुड़	मधुर, क्षार	स्निग्ध	—	—
3.	द्राक्षा	मधुर	गुरु स्निग्ध	शीत	मधुर
4.	महुआ पुष्प	मधुर, कषाय	गुरु स्निग्ध	शीत	मधुर
5.	गम्भारी	तिक्त, कषाय मधुर	गुरु	उष्ण	कटु
6.	धातकी	कषाय	लघु, रूक्ष	शीत	कटु

चिकित्सकीय गुण (Therapeutic properties)

ज्वरान् प्रशमयेत् सर्वान् कुर्यात्तीक्ष्णं धनञ्जयम्।
दुर्वारां ग्रहणीं हन्ति रक्तातीसारमुल्वणम्॥

(भै.र. अतीसार 11)

Indications - Jwara, Grahani, Raktatisara, Agnimandyahara.

Matra - 12-24 ml

Anupana - Jala

Research updates and clinical evidences

- According to modern H. antidysenterica possess anti-diarrhoeal property as its aqueous and methanolic leaf extracts were found to inhibit the growth of diarrhoeal pathogens. Along with it has anti-inflammatory, analgesic, anti oxidant, anti haemorrhoidal action. It also possess CNS stimulant activity.

  Reference- Snehadri Sinha, Aishwarya Sharma. P Hemlatha Reddy, Brijesh Rathi, NVS RK Prasad, Amit Vashishtha, Evaluation of phyto chemical and pharmacological aspects of Holarrhena anti dysenterica (Wall) : A comprehensive review. Journal of Pharmacy Research; 6 (4); 2013:488-492.
- Experimental study done on Kutajarishta to evaluate its effect on amoebiasis shows that it lowers the peripheral level of 5-hydroxy-tryptamine thereby helps in decreasing the virulence of E-histolytic.

  Reference- Dinesh Chandra, Dixt SK. Sen PC, Joshi D. An Experimental study of Kutajarishta with special reference to Amoebiasis. Anc. Sci. life VIII(2); Oct 1988;100-102.
- Clinical study done on the efficacy of Kutajarishta and Kutajavaleha in the management of Grahani shows that Kutajarishta has highly significant result in the cardinal symptoms of Grahani. In this study 12 patients treated with Kutajarishta while 08 patients with Kutajavaleha for a duration of 21 days.

  Reference- Shingadiya RK. Chaudhary SA, Bedarkar P, Patgiri BJ, Prajapati PK. Clinical efficacy of fermentative medicinal formulation (Asava-Arishta)-A review. EJPMR 2015. 2(7) 131-130.

Gandhakadya Malahara (AFI-Part II, Page 165)

सिक्थ तैलं सुविमलं रसतोलक सम्मितम्।
गन्धकं गिरि सिन्दूरं तोलकार्द्धमितं पृथक्॥
टङ्कणं घनसारं च पृथक् माषद्वयोन्मितम्।
दत्वा सम्मेल्य यत्नेन काचकुप्यां निधापयेत्॥
मतो मलहरोऽयं तु गन्धकाद्य समाह्वयः।
विनाशयत्याशु भृशं पामामत्यर्थदारुणम्॥

(र.त. 8/63-65)

Ingredients

Sikta Taila, Shuddha Gandhaka, Girisindura, Shuddha Tankana, Karpura.

Chemical/phytochemical composition

S, HgO, $Na_2b_4O_7$

Pharmacodynamics and pharmacokinetics- Terpenoid

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	गन्धक	कटु	सर	उष्ण	कटु

2.	गिरिसिन्दूर	–	–	–	–
3.	टंकण	कटु	रूक्ष, तीक्ष्ण, सर, उष्ण	–	–
4.	कर्पूर	तिक्त, मधुर, कटु	लघु, रूक्ष	शीत	कटु
5.	सिक्थ	–	मृदु, स्निग्ध	–	–
6.	तिलतैल	मधुर, तिक्त, कषाय, कटु	स्निग्ध, उष्ण	–	–

चिकित्सकीय गुण (Therapeutic properties)

Pamahara

Matra- external application

Sevana Kala - 2-3 times for application

Research updates and clinical evidences

- Single case study done on Gandhakadya Malhara to see its effect on Padadari shows that it is highly effective in the treatment of Padadari. Study duration was one month.

  Reference- Leena KC, Sanila VK, Noble TM et al. A critical review on Gandhakadya Malhara. Kerala Journal of Ayurveda 1(1):49-53 (2022).
- In the antimicrobial study that was carried out to evaluate the antimicrobial activity of Gandhakadya Malahara was found effective in P. mirabilis and P. acne. By the virtue of the property of the ingredient as Twak Vikaras (Kushta, Pama, Sidma, Kandu etc.) Gandhakadya Malahara is known to act as Antimicrobial.

  Reference- Gigi N, Chaitra LV. Antimicrobial activity of Gandhakadya Malahara in vitro study. Journal of Ayurveda and Integrated Medical Sciences. 2021 Nov 7;6(5):94-9.

Lepa Guti (AFI Part III page 232)

Ingredients

Punarnava, Lodhra, Chitraka, Shunthi, Shuddha Guggulu, Haridra, Triphala Kwatha and Gomutra.

Chemical/phytochemical composition

Alkoloid, flavonoids, tannis, steroid

Pharmacodynamics and pharmacokinetics

क्र. सं.	द्रव्य	रस	गुण	वीर्य	विपाक
1.	रक्त पुनर्नवा	मधुर तिक्त कषाय	लघु, रूक्ष	शीत	कटु
2.	चित्रक	कटु	लघु, रूक्ष, तीक्ष्ण	उष्ण	कटु
3.	शुण्ठी	कटु	गुरु, तीक्ष्ण, रूक्ष	उष्ण	मधुर
4.	गुग्गुलु	तिक्त, कटु	लघु, रूक्ष सूक्ष्म व सर	उष्ण	कटु
5.	हरिद्रा	तिक्त कटु	रूक्ष, लघु	उष्ण	कटु
6.	आमलकी	अम्ल प्रधान पंचरस	गुरु, शीत, रूक्ष	शीत	मधुर
7.	हरीतकी	कषाय प्रधान पंचरस	लघु, रूक्ष	उष्ण	मधुर
8.	विभीतकी	कषाय	लघु, रूक्ष	उष्ण	मधुर
9.	गोमूत्र	कटु लवण, समधुर	लघु, तीक्ष्ण, उष्ण	—	—

चिकित्सकीय गुण (Therapeutic properties)

Amavata, Shotha, Vruddhi Roga, Gandamala, Arbuda and Yoniroga Nashaka.

Matra - External application

Research updates and clinical evidences

Gel formulation containing prepared oil and aerosil is simple to plan and is helpful to apply over the wound. exact reference for this gel formulation is definitely not reported before and on experimentation premise, the structure was created. It can conclude that among all modern prepration and wrt ayurvedic formulation, the gel form is compatible. Reference- Gandhi AJ, Sharma S, Sitapara B, Goriya P. pharmaceutical development and dosage form modification of lepa guti; an ayurvedic topical formulation.

6 CHAPT. Dosage Forms & Cosmetic Products

Syllabus

Definition of dosage form, - Cosmetics Advantages and disadvantages of currently available dosage forms and cosmetics. Route of their administration. Research updates on modification of classical Ayurvedic dosage forms and relevant case studies.

Learning objectives

1. Define the term- Dosage forms.
2. Discuss the need of different dosage forms.
3. Explain the classification of different dosage forms.
4. Enlist the solid / liquid / semisolid dosage forms.
5. Discuss the routes of administration of different dosage forms.
6. Describe the advantages and disadvantages of currently available dosage forms.
7. Discuss the research updates about modification of classical Ayurvedic dosage forms.
8. Discuss the relevant case studies of different dosage forms.
9. Define the term Cosmetics.
10. Explain the classification of cosmetics based on their application on the specific body parts.
11. Differentiate between the ancient cosmetics and modern-day cosmetics.
12. Compare and appraise herbal cosmetics vs synthetic products

Total - 7 hours (Lecture :05 hour, Non-lecture: 02 hours)

Marks- 5 marks, MCQ- Yes, SAQ (5 Marks)- Yes and LAQ (10 Marks)- No

Definition of Dosage Forms

When raw drugs are transformed by different pharmaceutical procedures or admixed with various kinds of adjuncts so that it can be administered into the body by different route according to need. then it is known as dosage forms. Dosage form should fulfil the expectation of physicians, patients and pharmaceutical persons.

Definition of cosmetics

According to the Drugs and Cosmetics Act 1940 Cosmetic means any article intended to be rubbed, poured, sprinkled or sprayed on, or introduced into, or otherwise applied to, the human body or and part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance, and includes any article intended for use as a component of cosmetic. (Section 3 aaa]

Currently available dosage forms

Various dosages and cosmetics forms are available some of these are as follows-

Drug dosage form:

Aerosol

Bar chewable

Bead

Capsule (Coated, Gelatin coated, Delayed release, Extending release)

Cellular sheet

Chewable Gel

Concentrate

Cream

Crystal	Douche
Dressing	Drop
Elixer	Emulsion
Enema	Extract
Fiber (Extended Release)	Film
Gas	Gel
Granule	Gum, Chewing
Implant	Inhalent
Injection	Liposome
Insert	Irrigant
Jelly	Liniment
Lotion	Lozenge
Ointment	Pastille
Pill	Poultice
Powder	Rinse
Solution	Sponge
Spray	Stick
Suppository	Suspension
Syrup	Tablet
Tincture	Tampon

Cosmetics dosage form:

Cream, Salve	Gel
Lipstick	Mouthwash
Ointment	Tooth paste & Tooth powder
Powder	Shampoo
Shaving preparations	Nail lacquers and removes

Dosages forms can be categorized according to their route of administration and their physical forms-

According to their route of administration

Oral- Tablet, Capsule, Powder, Syrup, Suspension, Emulsion Pressurized Metered Dose inhaler etc.

Sublingual/Buccal- Lozenges, Tooth paste, Tooth powder etc.

Vaginal and rectal- Suppository, Enema, Pessary etc.

Parential- Injection, Infusions

Dermal- Ointment, Liniment, Paste, Cream, Lotion, Lip balm, Shampoo etc.

Mucosal- Nasal spray, Eye ear drops

According to physical forms

Solid- Tablet, Capsule, Powder, Transdermal patches etc.

Semi solid- Gel, Cream, Ointment, Pessary, Suppositories etc.

Liquid- Syrup, Elixirs, Emulsions, Suspensions, Lotion, Liniments etc.

Gaseous- Aerosol, Inhalations, Sprays etc.

Currently available cosmetics- Some of these are as follows-

1. **Solution-**
   - Water based e.g.:
     1. Hand soap
     2. Shampoos
     3. Eye makeup remover
   - Hydroalcoholic e.g.:
     1. Mouth wash
     2. After shave cologue
     3. Facial toner
     4. Hair spray
   - Anhydrous e.g.: Nail polish remover
2. **Emulsions-**
   - O/W emulsions e.g. Hair conditions, Shaving creams, facial moisturing creams etc.
   - W/O emulsions - e.g. Diaper rash products etc.
   - Water-in-silicon-e.g. facial foundation cream, eye shadows etc.
3. **Lotions**
4. **Creams:** e.g. Sunscreen, hair conditioners etc.
5. **Ointment**
6. **Paste-** Tooth paste
7. **Suspension-** Mascara, Lip gloss, liquid eyeliner, facial toners etc.

8. **Powder-** Body powder, Tooth powder, Face powder etc.
9. **Gel-** Facial cleansing, Shaving gels, Hand sanitizers gel etc.
10. **Stick-** Deodorant, Lipstick, Lipliner etc.
11. **Aerosol-** Hair sprays, Hair mouse, shaving cream etc.

Advantages and disadvantages of some of currently available dosage forms

Sr. No.	Dosage forms	Route	Advantages	Disadvantages
1.	Aerosol	Oral & Nasal	Quicker onset of action Low amount of drug is required Direct delivery to the treatment site	Expensive Difficult to prepare from insoluble drug
2.	Capsule	Oral	Easier intake, higher drug absorption, fast action sthan tablets. By pass stomach in some cases.	May be expensive to that of tablet, possibility of interaction between shell and filled material
3.	Cream	Local	Easy application, Effective in local infections	Only externally used, may cause irritation
4.	Elixer	Oral	Less viscous and contains low sugar, can be taken easily	Due to hydroalcoholic vehicle may not palatable to all
5.	Emulsion	Oral	Mask the unpleasant taste of medicine	are having short self life
6.	Gel	Skin trans dermal	Gel can adhere well to application site than cream and ointment	Drugs of larger particle size do not absorb through skin
7.	Implant	Sub cutan-eous cavity	After inseration it can last upto three years, Vaginal and dental implant are most common	May cause infection, Dental implant may be more costly.
8.	Inhalent	Nasal	Local delivery, potentially higher concentration of drug reaches to target organ	Limitiation of medication, may cause irritant one airways.
9.	Liposome	Oral/ Intra venous	Increased efficacy, contains hydrophilic and hydrophobic compounds	High cost, Low solubility
10.	Liniment	Local	Penetration to skin fastly as compaire with an oil base	Needs rubbing on the surface causing uncomfort

11.	Lipstick	Lip local	Provide protection and moisturization to lips	May cause irritation
12.	Lotion	Skin	It is less greasy compaired to cream	May cause allergy
13.	Lozenges	Oral	Good to use the mouth and throat in cough remedies.	Heat liable drugs can not be used as high temperature is required for its preparation
14.	Mouth wash	Oral cavity	Provide fresh breath, very good for oral irritation, gingivitis and in other oral hygine.	Presence of alcohol may cause irritant to mouth cavity, may cause tooth staining.
15.	Ointment	Topical on body surface	Long period of stay on contact surface easy to apply	Diffculty to fix the amount, less stable dosage forms.
16.	Tooth paste	Apply to tooth surface	It is used to perform a variety of functions like removal of strains, for cleaning of tooth prevention of cavity, easy to apply in comparison to tooth powder	Difficulty to fix the right amount, may cause abrasion to tooth surface
17.	Pastille	Oral	Softer than lozenges higher bio-availability	May cause irritation, nausea.
18.	Powder	Topical/ internal	Easy administration, can be prepared easily. Can be used externally as well as internally. It is a popular dosage form easy application	May cause irritation while swallowing, more prone to be affected by atmospheric conditions.
19.	Salve	Topical	Local action of drug on site	May cause irritation
20.	Shampoo	Local on Hair	It remove dirt, oil etc. easily as compair to soap. Easy in application transport easily	Excessive use may cause damage to hair, may cause irritation to eye if comes in contact.
21.	Drop	Locally used in Eye, ear, nose	Direct applied to the organ like eye, ear, nose. Quick action, easy in application.	Shelf life is low, should be prepared in hygienic condition otherwise it get infected and cause harmful effect to contact organ.
22.	Spray	Locally used on body surface	Popularly used as cosmetics used to remove bad smell of body.	May cause irritation

23.	Suspension	Internally used	Increases bio-availability of drug. Drug taste is improved	Suspention is unstable as particle settles after sometimes
24.	Syrup	Internally used	More palatable as it contains sugar, popular dosage form for paediatric use	Delayed action can not be used in emergency condition
25.	Tablet	Internally used	Most convenient dosage form, dose of drug is fixed can be administered easily. Can be prepared easily	Children may face difficulty in swallowing. Drugs with poor water solubility are not good to prepare tablet of it.

Research update on modification of some classical Ayurvedic dosages form-

Sr No.	Classical Ayurvedic dosage form	Modification into other dosage form
1.	Swarasa	Juice-Amala juice etc. Extract drop-Tulsi drops Aquous extract Gel-Aloevera gel.
2.	Kalka	Capsule
3.	Kwatha	Dispersible table e.g. Ayush Kwatha Ghana Vati Granuler Infusion bags Pravahi kwatha
4.	Avaleha	Chocklate– Chavyanprash candy Granules– Vasa Avaleha Granules
5.	Churna	Tablet Capsules Suspension Gel.
6.	Ghrita	Ointment Cream Capsule-Mahatikta ghrita capsule
7.	Taila	Serum-face serum Cream Lipbalm
8.	Satva	Haritaki extract capsules

Relevant case studies

1. **Kwatha Ghana Vati :** Study done by Baragi et al. to evaluate the efficacy of Dashanga Kwatha Ghana Vati in the management of Urdhwaga Amlapitta. In this study total 138 patients were registered of which 110 had completed the study. Patients were randomly divided into 2 groups. Group A receive Dashanga Kwath Ghana Vati in a dose of 250 mg twice a day after food along with water while group B was placebo. After completion of study (8 weeks) significant relief in Urdhawga Amalpitta was seen in Group A. No adverse drug reaction were noted with administration of trial drug from 8 weeks of duration.

   Reference- Baragi VC, Vyas MK. Clinical evaluation of the efficacy of Dashanga Kwatha Ghana Vati in the management of Urdhwaga Amalpitta (Non-ulcer dyspepsia). Ayu. 2012 Apr; 32(2):219-23.

2. **Vasa Avaleha and Granules :** Study done on Vasa Avaleha and its granules on Tamaka Shwasa to evaluate its efficacy show that both of the dosages forms are effective without manifesting any adverse reactions.

   Reference- Paeliya AM, Patgiri B. Galib R, Prajapati PK. Efficacy of Vasa Avaleha and its granules on Tamaka shwasa (Bronchial asthma) : Open-Label randomized clinical study. Ayu. 2015 Jul-Sep; 36(3):271-7.

3. **Chavyanprash Candy :** Study done of Chavyanprash candy (Conversion of Avaleha into candy form) shows that prepared form is

very attractive and shows the presence of phenol, saponins, glycosides steroid tannin and alkaloids.

Reference- Kupkar M. Kusarkar P. Dudhgaonkar T. A study on formulation and Evaluation of Herbal Chavyanprash chocolate. Research Journal of Pharmaceutical dosage forms and Technology. 14(2):April-June 2022;123-126.

4. **Sudarshana powder and Sudarshana suspension :** Study done to determine the safety profile of the Sudarshana powder and its novel preparation Sudarshana suspension. The experimental results suggest that novel formulation Sudarshana suspension was potentially safe for chronic administration in rats and no significant differences were observed in tested parameters on day 3 and day 8 when compared to the day 0 (baseline) values in healthy volunteers.

   Reference- Weerakoon WASS, Perera PK, Samarasinghe K. Gunasekara D. Suresh TS. Acute and Sub chronic Oral Safety Profiles of the Sudarshana Suspension. Evid Based Complement alternat Med. 2020. Nov 28;202:2891058.

5. **Shvitrahara Kashaya and Lepa:** Clinical study done by Dhanik A et.al in Vitiligo where Shvitrahara Kashaya and Lepa (with slight modification) was studied in the patients of Shvitra. Shvitrahara Kashaya was prepared by following classical method and the Lepa was prepared by taking the Shvitrahara Kashaya, and its Kalka along with Sphatika Hartala and mustard oil. In the prepared mustard oil (After Taila Paka), bee wax, powder of Sphatika and Hartala was added and ointment was prepared. Group I patients were treated with Kashaya and Lepa as topical application Group II with Lepa only and Group III with oral psoralens. From this study it was concluded that Shvitrahara Kashaya in decoction form and the same drugs along with Haratala on local use in vitiligo is safe with significant pigment regarding capacity.

   Reference- Dhanik A, Sujatha N, Rai NP clinical evaluation of the efficacy of Shvitrahara Kashaya and lepa in Vitiligo. Ayu. 2011 Jan; 32(1):66-9.

6. **Lepa Guti and Gel:** Study done by Gandhi AJ et al on Lepa Guti where it was modified in Gel, ointment and cream form. Rate of medicament (94%) and sensible spreading co-proficiency (0.116 cm2/mg) it was concluded that prepared Gel is most helpful and satisfactory form.

   Reference- Gandhi AJ, Sharma S., Sitapara B, Goriya P., Bedarkan P. Patgiri KJ. Pharmaceutical Development and Dosage form modification of Lepa Guti: An Ayurvedic Topical formulation. WJPPS;3 (5);2016:905-911.

Differentiate between the ancient cosmetics and modern-day cosmetics

The evolution of cosmetics spans from ancient times to the modern day, with significant differences in ingredients, purposes, application techniques, and regulation.

Ingredients and Formulations

Ancient Cosmetics:

Natural Ingredients: Ancient cosmetics were derived from naturally available substances. Ingredients like clay, minerals, plant extracts, animal fats, and herbs were commonly used.

Examples:

- Kohl (used in ancient Egypt) was made from lead sulfide or soot for lining the eyes.
- Henna was used for hair dyeing and body art in cultures such as ancient Egypt and India.
- Olive oil, honey, and milk were used for moisturizing and cleansing the skin.

Modern Cosmetics

Synthetic and Natural Ingredients: Modern cosmetics use a combination of natural ingredients and synthetic chemicals, including preservatives, emulsifiers, stabilizers, and fragrances. There is a

greater focus on stability, shelf life, and consistent results.

Examples:

- Parabens, silicones, and alcohols are commonly used in modern formulations.
- Vitamin-enriched and peptide-based anti-aging products are popular.
- There is a rising trend towards organic and clean beauty products that reduce the use of synthetic chemicals.
- Ancient cosmetics were deeply tied to cultural practices and natural resources, while modern cosmetics are shaped by science, commerce, and personal expression.

Aspect	Ancient Cosmetics	Modern-Day Cosmetics
Ingredients	Natural (clay, minerals, oils, plant extracts)	Synthetic and natural, complex formulations
Purpose	Spiritual, protective, medicinal	Aesthetic, self-expression, health
Application	Simple, handmade tools	Advanced tools, precise techniques
Regulation	Minimal, cultural knowledge-based	Strict regulation, safety standards
Sustainability	Sustainable, local	Concerns over plastic and synthetic waste
Cultural Influence	Symbol of status, class, and religion	Global diversity, personal empowerment

Compare and appraise herbal cosmetics vs synthetic products

Herbal Cosmetics

- **Natural Ingredients:** Herbal cosmetics are primarily composed of plant-based ingredients such as herbs, essential oils, plant extracts, and natural minerals. Common ingredients include aloe vera, neem, turmeric, henna, and lavender.
- **Absence of Chemicals:** These products avoid artificial chemicals like parabens, sulfates, phthalates, and synthetic fragrances, making them suitable for people seeking more natural alternatives.
- **Example:** A face cream made from aloe vera and turmeric for hydration and anti-inflammatory benefits.

Synthetic Cosmetics:

- **Chemical-Based Ingredients:** Synthetic cosmetics often contain lab-formulated chemicals, including preservatives, colorants, fragrances, and emulsifiers. Common synthetic ingredients include silicones, parabens, formaldehyde, and artificial dyes.
- **Consistency in Formulation:** Synthetic products are more consistent in texture, color, and effectiveness due to the precision in manufacturing.
- **Example:** A skin moisturizer with synthetic humectants like propylene glycol and dimethicone for a smooth finish.

Aspect	Herbal Cosmetics	Synthetic Cosmetics
Ingredients	Natural (plant extracts, oils)	Lab-formulated, synthetic chemicals
Effectiveness	Long-term, gradual results, mild	Immediate results, potent formulations
Safety	Fewer side effects, but risk of allergies	Possible irritation, safety testing but concerns over long-term risks
Environmental Impact	Eco-friendly, biodegradable, sustainable potential for pollution	Higher environmental footprint,

Cost	Can be expensive, but natural	Affordable, wide range of price points
Variety	Limited options, focus on general wellness	Wide range, targeted formulas for specific issues

Appraisal

Herbal Cosmetics are ideal for individuals looking for natural, eco-friendly, and gentler options, especially if they have sensitive skin or are concerned about environmental sustainability.

Synthetic Cosmetics offer wider variety, faster results, and targeted solutions for specific skin concerns but may carry a higher risk of irritation and environmental harm.

CHAPTER 7

Nutraceuticals

Syllabus

Introduction, Types, non-Indian nutraceuticals and their uses Ayurvedic Perspective of Nutraceuticals with special reference to dietic preparation, Rasayana with one examples for each category, mode of action, nutritional value calculation, research updates and case studies on below mentioned category

General Health : Kushmanda avaleha

Pediatric Health: Preenana Modaka(Kashyapa)

Geriatric Health: Chavanaprasha avaleha

Reproductive Health: Phala Grita

Women's health: Soubhagya Shuntipaka, Shatavari ghrita

Cardio-protective: Arjuna Ksheerapaka & Rasona ksheera paka

Sports endeavor: Kharjuradi mantha

Mental health: Brahma Rasayana

Learning objectives

1. Describe importance of combination of aahara and aushadha
2. Explain Nutraceuticals with its types
3. Corelate rasayana and nutrceutical with examples
4. Describe with examples mode of action of Ayurvedic nutraceuticals
5. Enlist at least two dietary preparations from Ayurvedic classics which can serve as rasayana/ nutraceutical in-(1) General Health (2) Pediatric Health (3) Geriatric Health (4) Women (Garbhini/ Sutika) Health (5) Cardio-protection (6) Chronic illness- recovery stage
6. Describe potential of Ayurvedic diet and Rasayana in sports endeavor
7. Explain research updates about nutraceuticals
8. Enlist atleast two examples of Aushadhi siddha aahara with its indications for each category (Aharadravya belonging to following category and kalpa prepared from that aahara Dravya and other aushadhi ingredients) (1) Jala varga, (2) Dugdha varga, (3) Ikshu varga, (4) Suka-dhanya varga, (5) Shimbi Dhanya Varga, (6) Shaka Varga, (7) Phala Varga, (8) Lavana Varga and (9) Spices
9. Create list of unique features of Ayurvedic nutraceuticals and appraise their current need

Total - 7 hours (Lecture :06 hour, Non-lecture: 01 hours)

Marks- 5 marks, MCQ- Yes, SAQ (5 Marks)- Yes and LAQ (10 Marks)- No

Introduction

Ayurvedic system of medicine and other traditional system of medicine, like, Roman, Greek and Chinese, have given importance to conventional food and herbs for achieving health and wellness as fundamental part of its holistic approach. The term Nutraceutical is derived from nutrition and pharmaceutics. It means that the product which are used to provide nutrition and are also used as medicine. These products can be isolated from a variety of sources like herbal products, dietary supplements, specific diets and

processed foods like cereals, soups etc. Nutraceuticals contain a variety of bio-active compounds present in edible sources that may be phytochemicals, fatty acids, amino acids etc. Nutraceuticals are used for the treatment and prevention from diseases. Now-a days Nutraceuticals are gaining attention due to potential nutrition, safety and therapeutic effects.

Types

Based on their application Nutraceuticals have been classified as follows–

1. Traditional - includes
   a) Functional foods
   b) Carotenoids
   c) Dietary fibres
   d) Phytochemicals
   e) Fatty acids
   f) Herbs
   g) Dietary supplements
   h) Probiotics
   i) Prebiotics
2. Non conventional approach
   a) Recombinant Nutraceuticals
   b) Fortified

Note

Functional foods– Functional foods are food that provide more than basic nutrition and may help reduce the risk of certain diseases and health conditions. These can include nutrient rich ingredients like fruits and vegetables. [FSSAI]

Carotenoids– These are natural compounds and sources of pigmentations which are accumulated in plants, fruits vegetables and algae. These are having health benefits in vision, heart function, immune function and prevention of cancer etc.

Fatty acids– are the component of oils and fats which are present in animal fats, seeds, olive oils, coconut etc. Sneha Kalpana which is prepared from oil and ghee is widely used in Ayurveda.

Dietary fibers– Dietary fiber is a carbohydrate polymer with ten or more monomeric units. It is also known as roughage [FSSAI].

Phytochemicals– These are bio-active chemical compounds that are naturally found in plants.

Dietary supplements– These are the product that can be taken as ingredients of diet for the maintenance and improvement of health and not to cure the diseases. Vitamins, iron, folic acid, calcium etc. is example of dietary supplements.

Probiotics– Probiotic foods are foods that contain live organisms which are beneficial to human health. Probiotic foods can include a variety of products like dairy products, bakery products, bakery products and dietary supplements. (FSSAI) prebiotics– Prebiotics are non-viable food components that can improve health by modulating gut microflora. These also promote the growth and activity of good bacteria in human gut and often are high fibre foods.

Non-conventional approach– These are artificially synthesized foods are food products.

Fortified nutraceuticals– When additional micro nutrients or vitamins added in fruit juice or milk to improve their value.

Recombinant Nutraceuticals– These products are produced by both genetic recombination and bio-technology. Gold kiwi fruit, golden rice etc. are examples of these nutraceuticals.

Non-Indian Nutraceuticals and their uses–

Type	Example	Uses
Traditional	Tomatoes	Reduce blood pressure Anticancer
	Salmon soy	Diabetes disease risk

		Antioxidant, Stimulate immune response
Functional food	Aloe	Wound healing, Immune stimulant anti-inflammatory etc.
	Broccoli	In risk of several cancers, antioxidant
Dietary supplement	Folic acid	Red blood cell formation, prevent defect in neural tube.
	Calcium	Bone, teeth etc. health.
	Vitamin A	Antioxidant
Prebiotics	Lactobacillus acidophilus	Gut health, replace diarrhoea causing bacteria
Fortified	Orange juice with calcium	Glycaemic control enhancement
Recombinant	Gold kiwi fruit	Immune system enhancement

Reference- Alali, M; Alqubaisy, M; Alija afari, M.N; AlAli, A.O; Baqais, L; Molouki A; Abushelaibi, A.; lai, K-S., Lim, S-HE. Nutraceuticals. Transformation of Conventional foods into Health promoters/Disease Preventers and safety considerations. Molecule 2021, 26, 2540. And Nasri H, Baradaran A, Shirzad H, Rafieian-Kopaci M. New concepts in Nutraceuticals as alternative for Pharmaceuticals. Int J Prev Med 2014;5:1487-99.

Ayurvedic perspective of Nutraceuticals

In Ayurveda, different Kalpana, which are used for the treatment of diseases, are prepared with herbs and other substances like Ghrita, Taila, Sugar, Jaggery, Money, Milk, Rice, Pulses, Vegetables etc. So, when these are administered, they may act as medicine and provide nutrition also.

Dietic preparation

Different types of dietic preparations are described in Ayurvedic texts some of these are as follows–

Sr. No.	Dietic preparation	Main Ingredients	Uses
1.	Manda	Rice	Agnideepana, Vatanulomaka
2.	Peya	Rice	Agnideepana, Daurbalya
3.	Vilepi	Rice	Tarpana
4.	Yavagu	Rice	Balya
5.	Yusha	Pulse	Agnideepana, Hridya
6.	Mamsa	Flesh of	Pranana, Shaswa,
	Rasa	Goat	Kasahara
7.	Takra and its types	Dadhi	Hridya, Vata Kapha Nashaka
8.	Khada /	Dadhi,	Hridya, Vata
	Kambalika	Pulse	Kapha Nashaka
9.	Raga	Fruits,	Hridya Rochana
	Shadava	Saindhava	Lavana
10.	Mantha	Sattu	Balya, Shrama nashaka

The above mentioned dietic preparations are used in the different disease condition as well as these are also used in healthy person as these are having specific pharmacological action.

Corelate Rasayana and nutraceutical with examples

Rasayana in Ayurveda and Nutraceuticals in modern health science share the common goal of promoting health, longevity, and vitality. Both concepts focus on using natural substances to enhance wellness, but they stem from different medical philosophies.

Ayurveda Rasayana	Modern Nutraceuticals
Rasayana refers to rejuvenation therapies aimed at prolonging life, preventing disease, and improving both mental and physical health.	Nutraceuticals are food-derived substances that provide medical or health benefits, including the prevention and treatment of disease.
Focuses on enhancing ojas (vital energy), agni (digestive fire), and balancing doshas (Vata, Pitta, Kapha).	Focuses on boosting specific nutrients, antioxidants, vitamins, and bioactive compounds that target particular physiological functions.
Uses whole herbs, formulations, and diets, with the belief that natural balance is key to health. health benefits.	Primarily relies on concentrated extracts, purified compounds, and functional foods to deliver specific

Example Comparisons of Rasayana and Nutraceuticals

Ashwagandha (Withania somnifera)

As Rasayana: Ashwagandha is classified as a Rasayana in Ayurveda, known for its adaptogenic properties, which help the body resist stress, fatigue, and improve strength and immunity.

As Nutraceutical: In modern science, Ashwagandha is marketed as an adaptogen and stress-relief supplement. It is often used to combat stress, anxiety, improve energy levels, and support cognitive function.

Amalaki (Emblica officinalis)

As Rasayana: Amalaki is considered a powerful rejuvenative, used to enhance immunity, improve digestion, and promote longevity. It is one of the key ingredients in Chyawanprash, a famous Ayurvedic tonic.

As Nutraceutical: Rich in Vitamin C and antioxidants, Amalaki is used in nutraceutical products for boosting immunity, promoting skin health, and supporting overall antioxidant defense against aging and chronic diseases.

Triphala (Combination of Amalaki, Haritaki, Bibhitaki)

As Rasayana: Triphala is a well-known Rasayana for its ability to detoxify the body, improve digestion, and balance the three doshas. It is used as a gentle laxative and tonic for digestive health.

As Nutraceutical: Modern use of Triphala focuses on its role in improving gut health, detoxifying the body, and acting as an antioxidant. It is used in supplements for digestive health, detoxification, and colon cleansing.

Turmeric (Curcuma longa)

As Rasayana: Turmeric is a vital Rasayana herb in Ayurveda, renowned for its anti-inflammatory, antioxidant, and wound-healing properties. It helps purify the blood, supports joint health, and strengthens the immune system.

As Nutraceutical: Turmeric is a widely used nutraceutical ingredient in the form of curcumin supplements, marketed for its anti-inflammatory and antioxidant effects. It is particularly popular in managing joint pain (like arthritis), supporting cardiovascular health, and boosting immune function.

Shilajit (Asphaltum)

As Rasayana: Shilajita is considered a potent Rasayana for its rejuvenating and anti-aging properties. It is believed to enhance physical strength, improve mental clarity, and increase vitality and longevity.

As Nutraceutical: Shilajita is marketed as a supplement that increases energy levels, improves testosterone levels, enhances cognitive function,

and has anti-aging benefits due to its high fulvic acid content.

Brahmi (Bacopa monnieri)

As Rasayana: Brahmi is used as a Rasayana to enhance cognitive function, memory, and intelligence. It is also valued for its calming properties, promoting mental clarity and reducing anxiety.

As Nutraceutical: In the nutraceutical industry, Brahmi is recognized as a nootropic (cognitive enhancer) and is included in supplements designed to improve memory, focus, and reduce symptoms of anxiety and depression.

Synergy Between Rasayana and Nutraceuticals

Preventive Approach: Both Rasayana and nutraceuticals aim at maintaining health rather than merely treating disease. For instance, Rasayana therapies emphasize preventing illness by strengthening the body's ojas (immunity), while nutraceuticals seek to prevent chronic diseases by enhancing bodily functions through nutrition.

Holistic Health: Rasayana looks at overall well-being (physical, mental, and spiritual), which can be seen in the holistic role nutraceuticals play today in preventing conditions like oxidative stress, managing inflammation, and promoting overall vitality.

Use of Natural Ingredients: Both systems prefer natural plant-based remedies. Rasayana herbs like Ashwagandha, Brahmi, and Amalaki are part of the nutraceutical industry as natural supplements for stress, cognitive health, and immune support.

The relationship between Rasayana and Nutraceuticals demonstrates a convergence of ancient wisdom and modern science. While Rasayana is rooted in balancing the body's energies and promoting holistic health, nutraceuticals focus on using concentrated forms of these natural substances to deliver specific health benefits. Both aim to enhance longevity, vitality, and well-being using natures resources.

Describe with examples mode of action of Ayurvedic nutraceuticals

Ayurvedic nutraceuticals derive their therapeutic benefits from the **holistic and synergistic interactions** of natural ingredients, primarily herbs and minerals, which work on multiple physiological systems. The mode of action in Ayurvedic nutraceuticals often revolves around balancing the **doshas** (Vata, Pitta, and Kapha), improving **Agni** (digestive fire), enhancing **ojas** (immunity and vitality), and detoxifying the body through natural pathways.

1. Ashwagandha (Withania somnifera)

Mode of Action

- **Adaptogenic properties**: Ashwagandha is classified as an adaptogen, which means it helps the body adapt to stress by regulating the hypothalamic-pituitary-adrenal (HPA) axis. It stabilizes cortisol levels, reduces oxidative stress, and enhances energy levels.
- **Nervine tonic**: It acts as a nervine tonic, nourishing the nervous system and promoting calmness, which helps reduce anxiety and improves mental clarity.
- **Immune modulation**: It modulates immune responses by enhancing the body's resistance to infection and supporting the production of white blood cells.

Example: In modern nutraceuticals, Ashwagandha is used in supplements to reduce stress, improve sleep quality, and enhance endurance, which correlates with its traditional Rasayana use for strengthening ojas and increasing vitality.

2. Turmeric (Curcuma longa)

Mode of Action

- **Anti-inflammatory**: The active compound **curcumin** inhibits inflammatory pathways (e.g., NF-kB pathway), reducing the

production of pro-inflammatory cytokines. This makes it highly effective in reducing chronic inflammation and managing conditions like arthritis.

- **Antioxidant** Curcumin neutralizes free radicals and enhances the body's own antioxidant enzymes like superoxide dismutase (SOD). This protects cells from oxidative damage, a key factor in aging and various diseases.
- **Detoxification** Turmeric enhances liver detoxification pathways by stimulating the production of bile, which aids in the removal of toxins from the body.

Example Turmeric supplements in nutraceuticals are used to manage inflammation, support joint health, and protect against oxidative stress. This mirrors its Ayurvedic use as a Rasayana for blood purification and anti-inflammatory benefits.

3. Triphala (Combination of Amalaki, Bibhitaki, and Haritaki)

Mode of Action

- **Digestive health** Triphala stimulates peristalsis (intestinal movement) and acts as a mild laxative, ensuring regular bowel movements without harsh side effects. It supports the natural elimination of toxins (mala).
- **Detoxification and cleansing** It detoxifies the gastrointestinal tract, improving the absorption of nutrients and elimination of waste, thus promoting overall digestive health.
- **Antioxidant** Each of the three fruits in Triphala provides a rich source of antioxidants, which help to neutralize free radicals and protect cells from oxidative damage.

Example Triphala is used in nutraceuticals for gut health, promoting healthy digestion, detoxification, and acting as an antioxidant to protect against aging. In Ayurveda, it is a Rasayana that balances all three doshas and supports overall longevity.

4. Brahmi (Bacopa monnieri)

Mode of Action

- **Cognitive enhancement** Brahmi promotes the production of acetylcholine, a neurotransmitter that is vital for cognitive function, memory, and learning. This increases synaptic plasticity, which improves memory retention and cognitive processing.
- **Neuroprotective** Brahmi protects neurons from oxidative stress by reducing lipid peroxidation and enhancing antioxidant enzymes in the brain, thus slowing down age-related cognitive decline.
- **Anxiolytic** It reduces stress and anxiety by modulating levels of serotonin and GABA (gamma-aminobutyric acid), two key neurotransmitters involved in mood regulation.

Example Brahmi-based nutraceuticals are often marketed as nootropics, enhancing memory and learning, while reducing stress and anxiety. This correlates with its traditional use as a Rasayana for cognitive health and mental clarity.

5. Shilajit (Asphaltum)

Mode of Action

- **Energy production** Shilajit enhances mitochondrial function, which improves the production of ATP (adenosine triphosphate), the energy currency of the cell. This results in increased energy and endurance.
- **Fulvic acid action** Fulvic acid, a key active compound in Shilajit, acts as a powerful antioxidant and aids in nutrient absorption by transporting minerals into cells. It also helps chelate (bind and remove) toxic heavy metals from the body.
- **Reproductive health** Shilajit increases testosterone levels and improves sperm count and motility, supporting male reproductive health.

Example Shilajit nutraceuticals are used to boost energy, enhance athletic performance, and

promote reproductive health. In Ayurveda, Shilajit is revered as a Rasayana for strengthening vitality, especially for male reproductive and energy-enhancing properties.

6. **Amalaki (Emblica officinalis)**

- Immune enhancement: Amalaki is rich in Vitamin C and bioflavonoids, which boost immune function by stimulating white blood cell production and enhancing the body's resistance to infections.
- Antioxidant action: It has strong antioxidant properties that neutralize free radicals, preventing oxidative stress and cellular damage, contributing to anti-aging effects.
- Digestive support: Amalaki strengthens digestion and promotes a healthy metabolism by balancing Pitta dosha and enhancing Agni (digestive fire), thereby improving nutrient absorption.

Example : Amalaki-based nutraceuticals are used to enhance immune function, improve skin health, and provide antioxidant support. This reflects its use in Ayurveda as a Rasayana for promoting longevity, immunity, and digestive health.

7. **Guggulu (Commiphora mukul)**

Mode of Action

- **Lipid metabolism** : Guggulu helps regulate lipid metabolism by reducing cholesterol levels and promoting the breakdown of fats, making it beneficial in managing hyperlipidemia (high cholesterol levels) and obesity.
- **Anti-inflammatory** : It inhibits the activity of pro-inflammatory enzymes such as COX-2 (cyclooxygenase-2), reducing inflammation in joints and tissues.
- **Detoxification** : Guggulu aids in detoxifying the body by clearing out ama (toxins) and promoting liver function, helping the body to metabolize and eliminate waste products.

Example : Guggulu nutraceuticals are commonly used for managing high cholesterol, reducing joint inflammation, and supporting weight management. In Ayurveda, Guggulu is used to balance Kapha dosha and detoxify the body.

The mode of action of Ayurvedic nutraceuticals is based on the holistic integration of body systems and the principle of restoring balance (doshas). These nutraceuticals work by:

- Enhancing the body's immune function (boosting ojas).
- Balancing metabolic processes (improving Agni).
- Providing antioxidant protection.
- Reducing inflammation and supporting detoxification.

In both traditional Ayurveda and modern nutraceuticals, the focus is on nourishing and rejuvenating the body to promote long term wellness.

Enlist at least two dietary preparations from Ayurvedic classics which can serve as rasayana/ nutraceutical.

General Health- Chyawanprasha, Triphala

Pediatric Health- Swarna Prashana, Bala Rasayana

Geriatric Health- Amalaki Rasayana, Brahma Rasayana

Women (Garbhini/ Sutika) Health- Phala Ghrita, Dashamularishta

Cardio-protection- Arjuna Kshirapaka, Lashunadi Rasayana

Chronic illness- recovery stage- Shadanga Paniya, Pippali Vardhavana Rasayana.

Potential of Ayurvedic diet and Rasayana in sports endeavor

Ayurvedic diet and Rasayana therapy have significant potential in enhancing performance, recovery, and overall well-being in athletes and individuals involved in sports. Ayurveda, with its focus on personalized nutrition, balanced energy, and long-term health, offers unique ways to support physical and mental endurance, strength, and recovery.

Improving Physical Strength and Stamina

- **Ashwagandha (Withania somnifera)**: Known as a potent Rasayana, Ashwagandha is widely used in Ayurveda to enhance strength, stamina, and physical endurance. It helps reduce cortisol levels and acts as an adaptogen, enabling athletes to better cope with physical stress, improve energy levels, and promote recovery. Studies show that Ashwagandha supplementation improves muscle mass and strength, making it an ideal addition to a sports regimen.
- **Shatavari (Asparagus racemosus)**: Traditionally used to enhance strength and vitality, Shatavari is rich in phytoestrogens and nutrients that support endurance, boost muscle recovery, and improve overall performance. It is particularly beneficial for female athletes, supporting their physical and hormonal health.

Boosting Endurance and Energy

- **Ghee (Clarified Butter)**: In an Ayurvedic diet, ghee is considered an excellent source of energy that nourishes tissues and supports **ojas** (vital energy). Its healthy fats provide sustained energy without the crash that comes from processed foods, helping athletes maintain peak performance.
- **Chyawanprash**: A famous Rasayana, Chyawanprash contains Amalaki (Indian gooseberry) and over 40 herbs that boost energy, improve immunity, and enhance respiratory function. Its antioxidant-rich formulation fights oxidative stress, commonly experienced during intense workouts, and ensures faster recovery from fatigue.

Supporting Muscle Recovery

- **Pippali (Piper longum)**: Pippali is used in Ayurvedic formulations like Pippali Rasayana to enhance digestion and improve nutrient absorption, which is vital for muscle repair and recovery. Its anti-inflammatory properties reduce post-workout soreness and muscle fatigue.
- **Moringa (Moringa oleifera)**: Known as a nutrient powerhouse, Moringa is rich in vitamins, minerals, and amino acids essential for muscle repair and recovery. It also contains anti-inflammatory compounds that support faster recovery after intense physical activity.

Promoting Joint and Bone Health

- **Turmeric (Curcuma longa)**: Turmeric's active compound curcumin is well-known for its anti-inflammatory and antioxidant properties. It helps in reducing joint inflammation, improving flexibility, and promoting faster healing of injuries. For athletes with high joint stress (such as runners or weightlifters), turmeric acts as a natural remedy to maintain joint health.
- **Arjuna (Terminalia arjuna)**: Arjuna is another Ayurvedic herb that supports bone health and cardiovascular endurance, making it beneficial for athletes involved in high-impact sports. Its role in promoting bone density and improving circulation helps prevent injuries and strengthens the skeletal system.

Optimizing Digestive Health and Nutrient Absorption

- **Triphala**: This blend of three fruits (Amalaki, Haritaki, and Bibhitaki) is often used to enhance digestion, detoxify the body, and improve nutrient absorption, all of which are crucial for athletes to maintain optimal energy levels and recovery. Triphala keeps the digestive system functioning efficiently, helping the body process food and supplements effectively.
- **Ajwain (Carom seeds)**: Ajwain is often used in Ayurveda to stimulate digestion, prevent bloating, and improve metabolism. For athletes with rigorous dietary schedules, a well-functioning digestive system ensures they extract the most nutrients from their food, contributing to overall stamina and endurance.

Enhancing Mental Focus and Reducing Stress

- **Brahmi (Bacopa monnieri)**: Brahmi is one

of the most effective Rasayana herbs for cognitive function. It enhances memory, concentration, and mental clarity, which is essential for athletes who need focus and quick decision-making abilities in competitive sports. Additionally, Brahmi reduces stress and anxiety, common in high-pressure sports environments.

- **Shankhapushpi (Convolvulus pluricaulis)**: Known for its ability to calm the mind and improve cognitive abilities, Shankhapushpi is beneficial for athletes to maintain composure, reduce mental fatigue, and enhance decision-making under stress.

Improving Immunity and Overall Vitality

- **Amalaki (Indian Gooseberry)**: Rich in Vitamin C and antioxidants, Amalaki boosts the immune system, protects against infections, and enhances physical strength. A strong immune system is vital for athletes, as infections and illnesses can disrupt training and performance.
- **Guduchi (Tinospora cordifolia)**: Guduchi is used as a general tonic in Ayurveda to strengthen the immune system, improve endurance, and promote vitality. It helps athletes by reducing fatigue and enhancing stamina over time.

Enhancing Respiratory Function

- **Sitopaladi Churna**: This Ayurvedic preparation is excellent for improving respiratory health and preventing respiratory infections, which can hinder performance in endurance sports such as cycling, running, or swimming.
- **Vasaka (Adhatoda vasica)**: Vasaka, commonly used in Ayurvedic respiratory tonics, helps athletes maintain lung capacity and function, which is essential for sports requiring cardiovascular endurance.

Detoxification and Post-Workout Recovery

- **Trikatu**: A combination of black pepper, long pepper (Pippali), and ginger, Trikatu enhances digestion and metabolism, helping athletes to clear metabolic wastes after intense physical activity. It also supports faster detoxification and fat metabolism, useful for athletes looking to maintain optimal body composition.
- **Shilajit**: Shilajit is a rejuvenating mineral pitch used in Ayurveda for energy and recovery. It contains fulvic acid, which enhances nutrient absorption, supports recovery from fatigue, and promotes tissue repair.

The Ayurvedic diet and Rasayana therapies offer a sustainable, holistic approach to sports performance and recovery. By focusing on personalized nutrition, enhancing immunity, improving physical and mental endurance, and supporting recovery through natural means, Ayurvedic principles can be effectively integrated into modern sports endeavors. They not only improve physical attributes but also strengthen mental resilience, helping athletes perform at their peak while maintaining long term health.

Enlist at least two examples of Aushadhi siddha aahara with its indications for each category Jala Varga

Jala Varga (Water Group)

1.Shadanga Paniya

Aharadravya: Water

Kalpa: A decoction made with six herbs (Mustaka, Parpataka, Ushira, Chandana, Udeechya, and Nagara).

Indications: Used in fevers, particularly Pittaja fever for cooling the body and detoxification.

2. Ushnodaka (Boiled Water)

Aharadravya: Water

Kalpa: Water boiled with herbs like ginger, cumin, or fennel.

Indications: Enhances Agni (digestive fire), improves digestion, and is useful in treating indigestion, bloating, and Vata-related disorders.

Dugdha Varga (Milk Group)

1. Kshirabala Taila

Aharadravya: Milk

Kalpa: Milk processed with Bala (Sida cordifolia) and other herbs in oil form.

Indications: Strengthens the nervous system, used in conditions like neuropathy, and to promote muscle strength and vigor.

2. Phala Ghrita

Aharadravya: Milk-based ghee

Kalpa: Ghee processed with herbs like Shatavari, Ashwagandha, and Vidari.

Indications: Used for promoting fertility, nourishing Garbhini (pregnant women), and for uterine health.

Ikshu Varga (Sugarcane Group)

1. Ikshu Sarpi (Sugarcane Ghee)

Aharadravya: Sugarcane

Kalpa: Sugarcane juice processed with ghee and medicinal herbs like Pippali.

Indications: Used as an aphrodisiac and in strengthening the body and improving overall vitality.

2. Sharkara Mantha

Aharadravya: Sugarcane (jaggery)

Kalpa: Jaggery mixed with water and herbs like Pippali and Maricha.

Indications: Useful in digestive disorders, fatigue, and weakness due to its quick energy-boosting effect.

Suka Dhanya Varga (Dry Grains Group)

1. Yavagu (Barley Gruel)

Aharadravya: Barley

Kalpa: Barley gruel cooked with medicinal herbs like Pippali or cumin seeds.

Indications: Useful in digestive disorders, convalescence after fevers, and Pittaja conditions where cooling and light food is required.

2. Godhuma (Wheat) Laja Rasayana

Aharadravya: Wheat

Kalpa: Popped wheat (laja) prepared with herbs like ghee and honey.

Indications: Enhances strength, is beneficial in weakness, and improves stamina.

Shimbi Dhanya Varga (Pulses Group)

1. Mudga Yusha (Green Gram Soup)

Aharadravya: Mudga (Green Gram)

Kalpa: Soup of green gram with cumin, ginger, and black pepper.

Indications: Cooling and easily digestible, used in fevers, digestive disorders, and balancing Pitta and Kapha doshas.

2. Masura Dal Soup

Aharadravya: Masura (Red Lentils)

Kalpa: Lentils cooked with ghee and spices like Pippali and ginger.

Indications: Useful in Vata disorders, weakness, and to support muscle recovery.

Shaka Varga (Vegetable Group)

1. Patola Kalka

Aharadravya: Patola (Pointed Gourd)

Kalpa: Vegetable processed with turmeric, coriander, and cumin.

Indications: Helpful in treating skin disorders, particularly Pittaja skin conditions like eczema and psoriasis.

2. Karvellaka (Bitter Gourd) Rasa

Aharadravya: Bitter Gourd

Kalpa: Bitter gourd juice mixed with herbs like Neem and Turmeric.

Indications: Useful in diabetes management, blood sugar regulation, and detoxification.

Phala Varga (Fruits Group)

1. Amalaki Rasayana

Aharadravya: Amalaki (Indian Gooseberry)

Kalpa: A preparation made from Amalaki processed with ghee, honey, and medicinal herbs.

Indications: Enhances immunity, anti-aging properties, improves digestion, and supports overall rejuvenation.

2. Draksha Avaleha

Aharadravya: Draksha (Grapes)

Kalpa: A paste of grapes mixed with herbs like Pippali and Ghee.

Indications: Beneficial in respiratory issues, anemia, and general debility.

Lavana Varga (Salt Group)

1. Saindhava Lavana with Hingu

Aharadravya: Saindhava Lavana (Rock Salt)

Kalpa: Rock salt mixed with Asafoetida (Hingu) and Pippali.

Indications: Used in digestive issues, bloating, and as an appetizer to stimulate digestion.

2. Saindhava Jal

Aharadravya: Rock Salt

Kalpa: Saltwater solution with herbs like lemon and ginger.

Indications: Useful in dehydration, balancing electrolytes, and improving digestive fire (Agni).

Spices (Katu Varga)

1. Trikatu Churna

Aharadravya: Pippali, Maricha (Black Pepper), and Shunthi (Dry Ginger)

Kalpa: Powder made from these three spices.

Indications: Improves digestion, helps in metabolism, and is useful in respiratory conditions like asthma and congestion.

2. Jeerakadyarishta

Aharadravya: Cumin (Jeeraka)

Kalpa: A fermented preparation with cumin, jaggery, and herbs like Pippali.

Indications: Beneficial for post-partum care, improving digestion, and balancing Vata and Kapha.

These Aushadhi Siddha Aahara formulations are specifically designed to enhance the therapeutic potential of the base food substances by combining them with medicinal herbs, thus offering targeted health benefits for various conditions.

List of unique features of Ayurvedic nutraceuticals and appraise their current need

Ayurvedic nutraceuticals stand apart from conventional dietary supplements due to their holistic approach and deep-rooted connection to traditional healing systems. Here are the unique features.

Holistic Approach to Health

Body-Mind-Spirit Integration: Ayurvedic nutraceuticals consider the balance of the body, mind, and spirit. They aim not just at treating symptoms but at promoting overall well-being by balancing the three doshas (Vata, Pitta, Kapha).

Personalization: These supplements are tailored to individual constitutions (Prakriti), addressing the unique needs of each person rather than a one-size-fits-all approach.

Synergistic Combinations

Polyherbal Formulations: Ayurvedic nutraceuticals often contain multiple herbs that work synergistically to enhance efficacy and reduce side effects. For example, Chyawanprash contains a wide array of herbs, with each supporting and enhancing the function of others.

Balanced Nutrition: Ayurvedic formulations often include ingredients that support multiple

bodily systems, providing comprehensive nutritional and therapeutic benefits.

Rasayana Effect (Rejuvenation and Longevity)

Rejuvenative Properties: Many Ayurvedic nutraceuticals fall under the category of Rasayana, which promote longevity, youthfulness, and tissue regeneration. Examples include Ashwagandha, Amalaki, and Brahmi, which rejuvenate and strengthen tissues and enhance resilience.

Anti-Aging: These products are known for their anti-aging properties, helping to maintain health, vitality, and balance in the body even as one ages.

Natural, Plant-Based Ingredients

Herbal Origins: Most Ayurvedic nutraceuticals are made from natural plant-based ingredients, minimizing the risk of synthetic additives or preservatives commonly found in conventional supplements.

Whole Plant Usage: Ayurveda emphasizes the use of whole plant parts (leaves, roots, fruits, etc.), which retain the integrity and bioavailability of the nutrients, offering a more natural form of supplementation.

Focus on Digestive Health

Agni (Digestive Fire) Enhancement: Ayurvedic nutraceuticals focus on improving Agni, the digestive fire, which is central to health. Poor digestion leads to the accumulation of Ama (toxins), so these supplements aim to enhance metabolism and detoxification, ensuring proper nutrient absorption.

Digestive Supportive Ingredients: Ingredients like Triphala, Pippali, and Ginger are frequently used to maintain and improve digestion.

Prevention-Oriented Approach

Preventive Health Focus: Ayurvedic nutraceuticals are not just curative but also preventive. Regular use is believed to prevent the onset of diseases by maintaining balance and harmony within the body systems.

Immune Boosters: Ingredients like Tulsi, Giloy, and Chyawanprash help boost the immune system, promoting resilience against infections and maintaining homeostasis.

Detoxification and Purification

Cleansing Properties: Many Ayurvedic nutraceuticals emphasize detoxification and the removal of toxins (Ama), which is seen as a key component of health. Ingredients like Triphala and Neem are known for their cleansing and detoxifying properties.

Support for Organ Function: These supplements often target specific organs like the liver, kidneys, and skin, enhancing their ability to process and eliminate waste.

Adaptogenic Properties

Stress Management: Ayurvedic nutraceuticals often include adaptogenic herbs like Ashwagandha, Brahmi, and Tulsi that help the body adapt to stress, improve mental clarity, and enhance emotional resilience.

Non-Toxic and Gentle: Unlike synthetic stimulants, adaptogenic herbs in Ayurveda gently support the body's ability to handle stress without causing side effects.

Biocompatibility and Minimal Side Effects

Gentle and Biocompatible: Ayurvedic nutraceuticals are generally safe and well-tolerated because they are derived from natural sources and align with the body's biochemistry.

Minimal or No Side Effects: Due to the natural ingredients and balanced formulations, Ayurvedic nutraceuticals tend to have minimal adverse reactions compared to synthetic supplements or drugs.

Long-Term Health and Sustainability

Sustainable Usage: Ayurvedic nutraceuticals promote sustainable, long-term health. Unlike quick fixes, they build strength and immunity over time, offering a gradual and sustained health benefit.

Environmental Sustainability: Most ingredients are cultivated using traditional, eco-friendly practices, making Ayurvedic products more sustainable and environmentally conscious.

Appraising the Current Need for Ayurvedic Nutraceuticals

1. **Rise of Chronic Diseases:** Modern lifestyles are linked to a surge in chronic conditions like diabetes, cardiovascular diseases, obesity, and autoimmune disorders. Ayurvedic nutraceuticals focus on balancing the body's systems and addressing the root causes of illness, making them ideal for chronic disease prevention and management.
2. **Stress and Mental Health:** With increasing levels of stress, anxiety, and mental health challenges, Ayurvedic adaptogens like Ashwagandha, Brahmi, and Shankhapushpi are gaining popularity as natural and effective alternatives to synthetic stress-relief medications.
3. **Immune System Support:** The COVID-19 pandemic has heightened awareness around the importance of immunity. Ayurvedic immune-boosting nutraceuticals like Chyawanprash, Tulsi, and Giloy are increasingly sought after for their proven ability to enhance the body's natural defenses.
4. **Demand for Natural and Plant-Based Products:** There is a growing shift towards plant-based, natural, and organic products. Ayurvedic nutraceuticals, with their herbal and non-synthetic formulations, meet this demand for clean-label, chemical-free supplements.
5. **Growing Interest in Personalized Medicine:** Ayurveda's individualized approach to health, based on body constitution (Prakriti) and dosha imbalances, aligns with the emerging trend of personalized and precision medicine. This offers a more tailored health solution compared to mass-produced nutraceuticals.
6. **Aging Population:** With an increasing elderly population, there is a growing need for preventive and rejuvenating products to support longevity and quality of life. Ayurvedic Rasayanas like Amalaki Rasayana and Brahma Rasayana cater to these needs by promoting vitality and reducing the effects of aging.
7. **Focus on Holistic Health:** As more people seek holistic health solutions that address physical, mental, and emotional well-being, Ayurvedic nutraceuticals offer a balanced approach that nurtures the whole person, rather than just treating symptoms.
8. **Growing Awareness of Gut Health:** The understanding of the gut's role in overall health has increased. Ayurvedic nutraceuticals like Triphala that support digestion, detoxification, and gut health are becoming highly relevant in promoting overall well-being.

Kushmanda Avaleha

निष्कुली कृत कूष्माण्ड खण्डान्पलशतं पचेत्।
निक्षिप्य द्वितुलं नीरमर्धांशिष्टं च गृह्यते तानि
कूष्माण्ड खण्डानि पीडयेद् दृढवाससा॥
आतपे शोषयेत्किचिच्छूलाग्रेर्बहुशो व्यधेत्।
क्षिप्त्वा ताम्रकटाहे च दद्यादष्टपलं घृतम्॥
तेन किंचिद्भर्जयित्वा पूर्वोक्तं च जलं क्षिपेत्।
खण्डं पलशतं दत्त्वा सर्वमेकत्र पाचयेत्॥
सुपक्वे पिप्पली शुण्ठी जीराणां द्विपलं पृथक्।
पृथक्पलार्धं धान्यकं पत्रैलामरिचत्वचम्॥
चूर्णीकृत्य क्षिपेत्तत्र घृतार्धं क्षौद्रमावपेत्।
खादेदग्निबलं दृष्ट्वा रक्तपित्तो क्षयी ज्वरी॥
कूष्मांडकावलेहोऽयं बालवृद्धेषु युज्यते।
उरःसंधानकृद्दृष्यो बृंहणो बलकृन्मतः॥

(शा.म. 8/22-28)

Ingredients and method of preparation- 100 Pala of white coloured and well ripen Kushmanda fruit is taken and its outer covering is removed. Now it is cut into small pieces. Pieces are kept in vessel containing two Tulas and boiled well. When water remains half of its quantity then heating is stopped and pieces are taken out and strained well. Pieces are piecered well with shoolagra. In a copper vessel eight Pala of Ghrita is taken and pieces of Kushmanda are fried well. Now the water which

was remained after boiling 100 Pala of Khanda is added and sugar solution is made. To this solution the fried pulp of Kushmanda is added and observed for Paka Lakshana. After that Prakshepa (Pipplali, Shunthi, Jeeraka each 2 Pala, Dhanyaka Tejpatra, Ela, Black piper and Dalchini (each half Pala) is added. After cooling four Pala honey is added and mix well.

Probable mode of action

It acts as Rasayana. Due to it Brimhana Guna it nourishes the body and Balya property provides stamina.

According to modern research Kushmanda (Benincasa his pida) contains flavonoids, alkaloids Tannin, Sponin and phenol. It is having antioxidant effect so it has potential to protect the body from harmful effect of oxidant or free radicals.

Nutrition value calculation

Method of calculating nutritive value are–

a) Laboratory testing and a nutrient analysis method.

b) Calculation using the nutritive values of various food products by using nutritive/calrofic values of each of the ingredients provided by a credible scientifically backed source.

Method of calculation

Write the amount of ingredients being used per serve/portion while cooking dish (here 1 dose is to be calculated).

Use the selected ingredients (spices and condiments not included for the calculation of energy/calories) and micro nutrients like fat, protein and carbohydrates.

Method– a) For calculation of energy use the following energy conversion factors :

Sr.No.	Component	Kcal/g
1.	Protein	4
2.	Fat	9
3.	Available carbohydrate	4
4.	Fibre	2

To convert energy in KJ to Kcal, divide KJ value by 4.186.

Calculation of energy and other nutrients

Energy/Calorie and ingredients may be calculated using the standard nutrients for other values of energy/calories and macronutrients per 100 g of food in various food items as provided in the book: Indian Food Composition Tables 2017 by National Institute of Nutrition (ICMR).

Nutritional Value for Kushmanda Avaleha

S. No.	Quality characteristics	Value
1.	Energy, Kcal/100 gm	363.13
2.	Total Fat gm/100 gm	2.37
3.	Saturated fat gm/100 gm	0.82
4.	Carbohydrate gm/100 gm	80.44
5.	Sugar gm/100 gm	69.72
6.	Sodium mg/100 gm	498.51
7.	Protein gm/100 gm	5.01
8.	Dietary fibre gm/100 gm	1.02
9.	Trans fat gm/100 gm	0.0
10.	Iron mg/100 gm	1.32
11.	Calcium mg/100 gm	158.72
12.	Potassium mg/100 gm	464.73

Reference- Bariha M, Singh S, Ghrit lahre N, Agarwal N, Chauhan NS, Rathias et al. Nutraceutical value of Kushmanda avaleha and its importance for children's Health and Growth-A review article. Pharmacog Rev. 2023:17(34)439-44.

Research update and case study

- Survey of classical, various scientific journals and online data bases on Kushmanda avaleha reveals that it is a complete care and an affective medication for various respiratory disorders.

Reference- Sharma S, Kaushik S. Yadav P, Rukunddin G. Prajapati PK. Exploring potential of Kushmanda avaleha in respiratory illness-A comprehensive review. BLDE Univ. J Health Sci 2022; 7:27-34.

• Clinical trial done on Kushmanda Kalpa for weight gain in mal nourished children where study design was open, randomized and controlled. In Group A total fifty children were given Kushmanda Kalpa with regular diet while in Group B fifty children were received regular diet without Kushmanda kalpa. Duration of study was three mouth and dose was 10 gm. After the completion of study significant results in objective parameters were found in both group. When mean ranks of both group were compared it was found that trial group was more significant than control group.

Reference- Firke AR, Bobade RB. An Exploratory Clinical Trial to Evaluate Efficacy of Kushmanda (Benincasa hispida) for weight gain in malnourshed children. J Ayu Herb Med 2019;5(3)87-89.

2. Prenana Modaka

प्रियल-मज्ज मधुक-लाजासितोपलैः ।
अपतनस्य संयोज्यः प्रीणनो मोदकः शिशो ॥
(A.Hri.U. 1/38)

Ingredients–
1. Priyala Majja
2. Madhuyashti
3. Laja
4. Sitopala

Modaka is prepared with above ingredients is known as Preenana modaka.

Probable mode of action

Laja has Tarpana property while Madhyashti is having Medhya property. So the Modaka provides Tarpana and strength the Medha Priyala may acts as Balya–

Nutritional value–

100 gm of Priyala has*–

Total protein	–	43.24%
Total carbohydrate	–	12.96%
Total crude fibre	–	18.50%
Crude fat	–	58%
Energy value	–	229.98 Kcal.

100 gm of Sugar has –

Calories	–	387
Carbohydrate	–	100 gm

Research update and case study

Study done by Sonali P et.al on Preenana Modka as Lehana in infant with malnutrition shows that it has a significant effect on growth and development of infant. This study was done in the infants of eight ot twelve years old to whom this Modaka was administered in a dose of ten grams twice daily for ninety days.

Reference- Sonali P. Dhumala S. Role of lehan : Assessement of efficacy of Preenna modak as Lehan in infants with malnutrition. Oct. 2023. Ayuscript volume 1(4):133-139.

Reference- Neeraj, Vinita Prisht, Shalini Purwar. Chironji (Buchanania lanzan) wonder tree : Nutritional and therapeutic values. Int. J. Curr Microbiol. App. Sci (2020) 9 (2): 3033-3042.

3. Chavyanprash Avaleha

बिल्वोऽग्निमन्थः श्योनाकः काश्मर्यः पाटलिर्बला ।
पर्ण्यश्वतस्त्रः पिप्पल्यः श्वदंष्ट्रा बृहतीद्वयम ॥
शृङ्गी तामलकी द्राक्षा जीवन्ती पुष्करागुरु ।
अभया चामृता ऋद्धिर्जीविकर्षभकौ शटी ॥
मुस्तं पुनर्नवा मेदा सैला चन्दनमुत्पलम् ।
विदारी वृषमूलानि काकोली काकनासिका ॥
एषां पलोन्मितान् भागाञ्छतान्यामलकस्य च ।
पञ्च दद्यात्तदैकध्यं जलद्रोणे विपाचयेत् ॥
ज्ञात्वा गतरसान्येतान्यौषधान्यथ तं रसम् ।
तच्चामलकमुद्धृत्य निष्कुलं तैलसर्पिषोः ॥
पलद्वादशके भृष्ट्वा दत्त्वा चार्धतुलां भिषक् ।
मत्स्यण्डिकायाः पूताया लेहवत्साधु साधयेत् ॥
षट्पलं मधुनश्चात्र सिद्धशीते प्रदापयेत् ।
चतुष्पलं तुगाक्षीर्याः पिप्पलीद्विपलं तथा ॥
पलमेकं निदध्याच्च त्वगेलापत्रकेशरात् ।
इत्ययं च्यवनप्राशः परमुत्तो रसायनः ॥
कासश्वासहरश्चैव विशेषेणोपदिश्यते ।
क्षीणक्षतानां वृद्धानां बालानां चाङ्गवर्धनः ॥
स्वरक्षयमुरोरोगं हृद्रोगं वातशोणितम् ।

पिपासां मूत्रशुक्रस्थान् दोषांश्चाप्यकर्षति ॥
अस्य मात्रां प्रयुञ्जीत योपरुन्ध्यान्न भोजनम् ।
अस्य प्रयोगाच्च्यवनः सुसृद्धोऽभूत् पुनर्युवा ॥
मेधां स्मृतिं कान्तिमनामयत्वमायुःप्रकर्षं बलमिन्द्रियाणाम् ।
स्त्रीषु प्रहर्षं परमग्निवृद्धिं वर्णप्रसादं पवनानुलोम्यम् ॥
रसायनस्यास्य नरः प्रयोगान्नभेत जीर्णोऽपि कुटीप्रवेशात् ।
जराकृतं रूपमपास्य सर्वं बिभर्ति रूपं नवयौवनस्य ॥
(च.सं.चि. 1/62-74)

1. Bilva – 48 gm
2. Agnimangha – 48 gm
3. Syonaka – 48 gm
4. Kasmari (Gambhari) – 48 gm
5. Patali (Patala) – 48 gm
6. Bala – 48 gm
7. Salaparni – 48 gm
8. Prsniparni – 48 gm
9. Mudgaparni – 48 gm
10. Masaparni – 48 gm
11. Pippali – 48 gm
12. Svadamstra (Goksura) – 48 gm
13. Brhati – 48 gm
14. Kantakari – 48 gm
15. Srngi (Karkatasringi) – 48 gm
16. Tamalai – 48 gm
17. Draksa – 48 gm
18. Jivanti – 48 gm
19. Puskara – 48 gm
20. Aguru – 48 gm
21. Abhaya (Haritaki) – 48 gm
22. Amrta (Guduci) – 48 gm
23. Rddhi – 48 gm
24. Jivaka – 48 gm
25. Rsabhaka – 48 gm
26. Sati – 48 gm
27. Musta – 48 gm
28. Punarnava (Raktapunarnava) – 48 gm
29. Meda – 48 gm
30. Ela (Suksmaila) – 48 gm
31. Candana (Sveta candana) – 48 gm
32. Utpala – 48 gm
33. Vidari – 48 gm
34. Vrsamula (Vasa) – 48 gm
35. Kakoli – 48 gm
36. Kakanasika – 48 gm
37. Amlaka (Amalaki) – 500 in number
38. Water for decoction – 12.288 L.
    reduced to 3.072 L.
39. Ghrita – 288 gm
40. Taila (Tila) – 288 gm
41. Matsyandika – 2.400 gm
42. Madhu – 288 gm
43. Tugaksiri (Vamsa) – 192 gm
44. Pippali – 96 gm
45. Tvak – 48 gm
46. Ela (Suksmaila) – 48 gm
47. Patra (Tejapatra) – 48 gm
48. Kesara (Nagakesara) – 48 gm

Special method of preparation

Ripe fresh Amalakis are bundle in a piece of cloth. Ingredients 1 to 38 are coarsely powdered and put in a vessel. Water is added and the Amalaki bundle is immersed by suspension in the vessel and boiled till the water is reduced to one fourth when Aamalaki fruit is cooked it is taken out and fried well. Sugar solution is made with Kwath and fried pulp is added till Siddhi Lakshana appeared. Now prakshepa is added. Honey is added after cooling.

Dose– 12 to 24 gm

Probable mode of actions

Nutritional value calculation—

Sr. No.	Testing Parameter	Results
1.	Fat	3.80%
2.	Protien	1.08%
3.	Carbohydrate	79.12%
4.	Sodium	52 mg/100 gm
5.	Vitamin C	10.29 mg/100 gm
6.	Total energy	355 Kcal/100 gm

Reference- Gyanendra YA, Eknath rao LC, Ingole R, Gandhi P. Chavanprash– A Traditional Nutraceutical, July 2019 WJPR 8(7):1337-1346

Case study

Clinical study done on Chavyanprash suggests that it is having immunity booster activity as it reduces disease symptoms of seasonal influences, modulated IgE and immunity markers C3 and C4 levels, improved pulmonary functions, decreased cortisol levels and increased quality of life.
Reference- DB Anantha Narayana, Sharanpasappa Drug P Ram Manohar, Anita Mahapatra and AR Aramya, Chyavanprash : A review of therapeutic benefits as in authoritative texts documented clinical literature. Journal of Ethnopharmacology. 2016.87.078.

Phala Ghrita

मञ्जिष्ठाकुष्ठतगरत्रिफलाशर्करावचाः ॥
द्वे निशे मधुकं मेदा दीप्यकः कटुरोहिणी।
पयस्याहिंङ्गुकाकोलीवाजिगन्धाशतावरीः ॥
पिष्ट्वाक्षांशैर्घृतप्रस्थं पचेत्क्षीरचतुर्गुणम्।
योनिशुक्रप्रदोषेषु तत्सर्वेषु च शस्यते॥
आयुष्यं पौष्टिकं मेध्यं धन्यं पुंसवनं परम्।
फलसर्पिरिति ख्यातं पुष्पे पीतं फलाय यत्॥
म्रियमाणप्रजानां च गर्भिणीनां च पूजितम्।
एतत्परं च बालानां ग्रहघ्नं देहवर्धनम्॥

1. Manjistha	–	12 gm
2. Kustha	–	12 gm
3. Tagara	–	12 gm
4. Haritaki	–	12 gm
5. Bibhitaka	–	12 gm
6. Amalaki	–	12 gm
7. Sarkara	–	12 gm
8. Vaca	–	12 gm
9. Haridra	–	12 gm
10. Daruharidra	–	12 gm
11. Madhuka (Yasti)	–	12 gm
12. Meda	–	12 gm
13. Dipyaka (Yavani)	–	12 gm
14. Katurohini (Katuka)	–	12 gm
15. Payasya (Ksira vidari)	–	12 gm
16. Hingu	–	12 gm
17. Kakoli	–	12 gm
18. Vajigandha (Asvagandha)	–	12 gm
19. Satavari	–	12 gm
20. Ghrta (Goghrta)	–	768 gm
21. Ksira (Godugdha)	–	3.0721

Probable mode of action

Main indication of Phala Ghrita is in Vandhyata. It is Vata dominance Roga Ghrita is Tridoshaghana and other ingredients of this formulation are having Tikta, Madhura and Katu Rasa, Katu and Madhura Vipaka. Due to these properties its acts in Vandhayata and Shukra Dosha.

Nutritional value– 100 grams of Ghee has following nutritional value-

Fat – 100 grams/100 grams

Vitamin A - 315-375 mg/100 grams

Calories - 900-903 calories/100 grams

Cholesterol - 252-284 mg/100 grams.

Research update and case study

Clinical trial done on Phala Ghrita to evaluate its efficacy on female infertily shows that Uttara Vasti of Phala Ghrita is effective in the treatment of infertility. It also have significant role in other complaints like menstrual disorder, lower abdominal pain, tenderness and dysparenia.
Reference- Otta SP, Tripathy RN. Clinical Trial of Phala ghrita on female infertility. Ans See Life. Vol XXII (2); October; 2002: pp 78-85.

Saubhagya Shunthi

कशेरुशृङ्गाटवराटमुस्तं द्विजीरकं जातिफलं सकोषम्।
लवङ्गशैलेयसनागपुष्पं पत्रं वराङ्गं शटिधातकी च॥
एला शताह्वा धनिकेभपिप्पली सपिप्पली सोषणका शतावरी।
प्रत्येकमेषामिह कर्षयुग्मं लौहं तथाभ्रं पलभागयुक्तम्॥
महौषधाच्चूर्णपलानि चाष्टौ पलानि त्रिंशत्सितशर्करायाः।
पलानि चाष्टावपि सर्पिषश्च प्रस्थद्वयं क्षीरमिह प्रयुक्तम्॥
पचेद्विधिज्ञः परमादरेण खादेदिदं शाणमथापि कोलम्।
कर्षोन्मितं वापि समीक्ष्य शस्तं सौभाग्यशुण्ठी कथिता भिषग्भिः॥

अग्निप्रदा सूतिगदापहा च सर्वातिसारग्रहणीहरा च ॥
(भैषज्यरत्नावली, स्त्रीरोगाधिकार, 396-399)

Ingredients

1. Kaseru	–	24 gm
2. Srngata (Srngataka)	–	24 gm
3. Varata (Kamala)	–	24 gm
4. Musta (Musta)	–	24 gm
5. Svetajiraka	–	24 gm
6. Krsnajiraka	–	24 gm
7. Jatipahala	–	24 gm
8. Jatikosa (Jatiphala)	–	24 gm
9. Lavanga	–	24 gm
10. Saileya	–	24 gm
11. Nagapuspa (Nagakesara)	–	24 gm
12. Patra (Tejapatra)	–	24 gm
13. Varanga (Tvak)	–	24 gm
14. Sati	–	24 gm
15. Dhataki	–	24 gm
16. Ela (Suksmaila)	–	24 gm
17. Satavaha	–	24 gm
18. Dhanika (Dhanyaka)	–	24 gm
19. Ibhapippali (Gajapippali)	–	24 gm
20. Pippali	–	24 gm
21. Usana (Marica)	–	24 gm
22. Satavari	–	24 gm
23. Lauha bhasma	–	24 gm
24. Abhraka (Abhra) bhasma	–	24 gm
25. Mahausadha (Sunthi)	–	384 gm
26. Sita	–	1.440 kg
27. Sarpi (Goghrta)	–	384 g
28. Ksira	–	1.536 L

Dose– 12 gm

Probable mode of actions

This formulation is used in Agnimandya, Grahani, Sutika Roga and to prevent post delivery problem of impaired location along with body pain etc. Shunthi acts as Agnideeka and Ama Pachaka and helpfull in Agnimandhya and Grahani. Ghrita is having properties, like Tridosha Shamaka, Dugdha Vardhaka. Ghrita alongs with Shatapusha, Twak, Pippali, Jeeraka acts as Dugdha Vardhaka. Jeeraka acts as Garbhashayaka Shodhaka. Musta, Chitraka, Garbhashaya, Sankochaka wich helps uterus to returns into its normal shape and size after delivery. While Shatpushpa help in Aartavajanana.

Nutritiona value–*

Iron	–	10.5 mg/ gram
Protein	–	6.8 g/ 100gram
Fat	–	25.7 mg/gram
Carbohydrate	–	42.5 g./100 gm
Calcium	–	212.02 mg/gm
Vitamin B12	–	0.5 mcg/gm
Total energy	–	426.0 Kcal

Research study and case study

- Shaubhagya Shunthi Churna and Paka show the same effect in Sutika Kala. The Churna can be seen to be better than the Paka form due to its longer shelf life and comparatively higher total energy. **Reference-**Shukla K. Dwivedi M. Kumar N. Pharmaceutical preparation of Saubhagya Shunthi Churna : A Herbal remedy for puerperal women Int. J. Ayurveda Res. 2010. Jan; 1(1):25-9.
- Saubhagya Shunthi Paka along with Balant Kadha was studied for its effect in post caesarian analgesia in post caesarian section cases. This combination was found to act as analgesic in post caesarian section cases. It was studied in total 50 of patiens. The dose given was Shaubhagya Shunthi Paka 10 gm twice a day along with warm water and Balant Kadha 20 ml twice a day with equal quantity of water after both meal. **Reference-** Mohite SS. Singh AA. A clinical study on evaluatioin & comparison of post caesarian analgesia with Ayurvedic and modern medicines. International Journal of Multidisciplinary Research and Development; 3(8); Aug 2016:50-53.

Shatavari Ghrita

शतावरीमूल तुलाश्चतस्रः सम्प्रपीडयेत्।
रसेन क्षीर तुल्येन पचेत्तेन घृताढकम्॥

जीवनीयैः शतावर्या मृद्वीकाभिः परुषकैः ।
प्रियालैश्चाक्षकैः पिष्टैर्द्वियष्टिमधुकैः पचेत् ॥
सिद्धे शीते च मधुनः पिप्पल्याश्च पलाष्टकम् ।
दत्त्वा दशपलञ्चात्र सितायास्तद्विमिश्रितम् ॥
ब्राह्मणान् प्राशयेत्पूर्वं लिह्यात्पाणितलं ततः ।
योन्यसृक्शुक्रदोषघ्नं वृष्यं पुंसवनं च तत् ॥
क्षतक्षयं रक्तपित्तं कासं श्वासं हलीमकम् ।
कामलां वातरक्तं च विसर्प हृच्छिरोग्रहम् ॥
उन्मादायमसंन्यासं वातपित्तात्मकं जयेत् ॥

(भैषज्यरत्नावली 13/139-144)

Ingredients

1. Shatavari mula	–	20 kg
2. Cow milk	–	20 liter
3. Cow Ghrita	–	3 kg
4. Jeevaka	–	12 gm
5. Rishabhaka	–	12 gm
6. Meda	–	12 gm
7. Mahameda	–	12 gm
8. Kakoli	–	12 gm
9. Ksheer kakoli	–	12 gm
10. Riddhi	–	12 gm
11. Vriddhi	–	12 gm
12. Jivanti	–	12 gm
13. Mudagaparni	–	12 gm
14. Mashaparani	–	12 gm
15. Mulethi	–	25 gm
16. Shatavari	–	12 gm
17. Munnaka	–	12 gm
18. Phalsa	–	12 gm
19. Priyala	–	12 gm
20. Honey	–	400 gm
21. Pippali	–	400 gm
22. Sugar	–	500 gm

Probable mode of action

Shatavari is having Madhura and Tikta Rasa, Madhura Vipaka and Sheeta Virya and it pacifies Vata and Pitta. Shatavari is having Stanyajanana, Shukrala properties so it helps in improving breast milk and sperm quality. Due to its Balya property it nourishes the body. Due to Medhya properties of Ghrita it is useful in Unmada and Sanyasa.

Nutritional value– 100 gm of Shatavari Ghrita contains approximately 77 gm of Ghrita, 10 gm of Honey and 13 gm of Sugar.

100 gram of Ghrita has–

Calories	–	900-903 calories
Fat	–	100 gm/100 gm
Vitamin A	–	315-375 mg/100 gm

100 gm of Honey has –

Calories	–	304
Carbohydrates	–	82 gm
Dietary fiber	–	0.2 gm
Protein	–	0.3 gm
Iron	–	0.42 mg

100 gm of Sugar has –

Calories	–	387
Carbohydrate	–	100 gm

100 gm of milk (Khoa) – (Indian food composition table, IIN, ICMR, 2017)

Protein	–	16.34
Total fat	–	20.62
Carbohydrate	–	16.53
Energy	–	1322 KJ
Vitamin	B1-0.11 mg	B2-0.11 mg
	B3-0.43 mg	B5-0.33 mg
	B6-0.06 mg	B7-20.39 mg etc.

Research update and case study

Clinical study done of Brihat Shatavari Ghrita and Baladi Churna to see its effect in female infertinity (Endo metrial receptivity). Administering Brihat Shatavari Ghrita Uttar Basti and Baladi Churna orally and in other group only Baladi Churna was given. Result shows highly significant effect in both group while Group A provided better result in upgradding endometrial receptivity comparatively. Reference- Verma A, Kamini D. Kumar S. A clinical study on Uttar Basti of Brihat Shatavari Ghrita and Baladi Churna in the management of Female Infertility W.S.R. to Endometrial Receptivity. JAIMS; 2(01);2017.

Arjuna Ksheerpaka

अर्जुनस्य त्वचा सिद्धं क्षीरं योज्यं हरामये।
(भैषज्यरत्नावली, हृदयरोग/11)

Ingredients-

Arjuna Twak	–	1 Part
Milk	–	15 Part
Water	–	15 Part

Probable mode of action

Arjuna is having Hridya property so it acts as cardio tonic. According to modern research it is useful in lowering the cholesterol and blood pressure.

Nutritional value – per 100 gm.

Energy value	–	410.20 Kcal
Protein	–	17.20 gm
Carbohydrates	–	42.10 gm
Total fat	–	15.90 gm

Research update and case study

- Conversion of Arjun Ksheer Paka into Spray dried powder shows that powder is easily soluble in water, having agreeable sweet taste along with pleasant smell, good shelf life as well as nutritive values. **Reference-** Swapnil Talmale, Bhrath Rathi, Dhiraj Singh Rajput. Modification of Drug dosage form of Arjuna ksheerpaka by using Spray drying technology J. Res. Tradit. Med 2017,-3(3):72-78.
- Clinical study on Arjuna Ksheerpaka Churna to evaluate its efficacy in dyslipidemia shows that it is effective and safe in the management of dyslipidema. The preclinical results also suggests that it is safer in HFD rat model compared to rosuvastatin. **Reference-** Timilsina K, Mishra A, Patial V, Gupta M, Chaudhary V, Singh, A randomized controlled clinical trial and preclinical efficacy of an Ayurvedic formulation Arjuna ksheerpaka churna for dylipidemia, Ind J Trad. Know; 23 (6) 2024.

Rasona Ksheerapaka

साधयेच्छुद्धशुष्कस्य लशुनस्य चुष्पलम्।
क्षीरोदकेऽष्टगुणिते क्षीरशेषं च ना पिबेत्॥
वातगुल्ममुदावर्तं गृध्रसीं विषमज्वरम्।
हृदरोगं विद्रधिं शोथं साधयत्याशु तत्पयः॥
(च.चि. 5/94-95)

Ingredients

Rasona	–	1 Part
Milk	–	4 Part
Water	–	4 Part

Probable mode of action

Rasona is having Hridya property and it also acts as Rasayana. It is having five Rasas except Amala Rasa. Due to it's Hridya and Rasayana Guna it acts as Cardio protective. According to modern research garlic reduces the level of total cholesterol and acts as antihyperlipidenic and protects the heart.

Nutritional value – Per 100 grams of Lasuna contains–

Protein	–	6.92
Total Fat	–	0.16
Carbohydrate	–	21.93
Energy	–	518 KJ
Vitamin B1	–	0.20 mg
Vit. C	–	12.62 mg

Per 100 gm of milk (Cow)

Protein	–	3.26
Total Fat	–	4.48
Carbohydrate	–	4.94
Energy	–	305 KJ
Vitamin B1	–	0.03 mg
Riboflavin	–	0.11 mg
Calcium	–	118 mg

Research update

Study done by Suryawanshi et al on the preparation method of Ksheera Paka where it was prepared by following Charaka and Shrangdhara

method and it was found that Lasuna Kshirapaka prepared according to Charaka Samhita was a better option. **Reference-** Suryawanshi N; Pharmaceutical and analytical evaluation of Lasuna Kshirapaka w.s.r. to Chraka and Shrangdhara methods. Anc. Sci Life. 2013 Jan; 32 (Supp 12): 350.

Kharjuradi Mantha

खर्जूरदाडिमीद्राक्षातिन्तिडीकाम्लिकामलैः ।
सपरूषैः कृतो मन्थः सर्वमध्यविकारनुत् ॥
(Sha.Mad. 3/10)

Ingredients- Pinda Kharjura, Dadima seed, Draksha, Tintidaka (Imli), Fresh Aamalaki, Changeri leaves and ripe, fruits of Phalasa. Mantha prepared by above ingredients is known as Kharjuradi mantha.

Probable mode of action

Most of the ingredients of the Mantha are having snigdha and Guru guna. Snigdha guna enhances snehana and pacifies Vata as well on Rukshata of body. Dadima along with Aamalaki acts as Hridya Kharjura and Phalasa provides Tarapana to body.

Nutritional Value - Per 100 grams*

	Protein	Total fat	Dietary firbre total	Carbohydrate	Energy (KJ)
Kharjura	2.45 gm	0.35 gm	8.95 gm	74.91	13.40
Dadima	1.33	0.15	2.83	11.58	229
Draksha	2.57	0.34	3.92	71.29	1279
Tintidaka	2.92	0.15	5.31	67.35	1207
Aamalaki	0.34	0.16	7.75	4.39	99
Phalasa	1.66	0.14	4.54	15.09	299

*IFCT, 2017

Brahma Rasayana

पथ्यासहस्रं त्रिगुणधात्रीफलसमन्वितम् ।
पञ्चानां पञ्चमूलानां सार्धं पलशतद्वयम् ॥
जले दशगुणे पक्त्वा दशभागस्थिते रसे ।
आपोथ्य कृत्वा व्यस्थीनि विजयामलकान्यथ ॥
विनीय तस्मिन्निर्यूहे योजयेत्कुडवांशकम् ।
त्वगेलामुस्तरजनी-पिप्पल्यगुरुचन्दनम् ॥
मण्डूकपर्णीकनकशङ्खपुष्पीवचाप्लवम् ।
यष्ट्याह्वयं विडङ्गं च चूर्णितं तुलयाऽधिकम् ॥
सितोपलार्धभारं च पात्राणि त्रीणि सर्पिषः ।
द्वे च तैलात् पचेत्सर्वं तदग्नौ लेहतां गतम् ॥
अवतीर्णं हिमं युञ्ज्याद्विंशैः क्षौद्रशतैस्त्रिभिः ।
ततः खजेन मथितं निदध्याद् घृतभाजने ॥
या नोपरुन्ध्यादाहारमेकं मात्राऽस्य सा स्मृता ।
षष्टिक पयसा चात्र जीर्णे भोजनमिष्यते ॥
वैखानसा बालखिल्यास्तथा चान्ये तपोधनाः ।
ब्रह्मणा विहितं धन्यमिदं प्राश्य रसायनम् ॥
तन्द्राश्रमक्लमवलीपलितामयवर्जिताः ।
मेधास्मृतिबलोपेता बभूवुरमितायुषः ॥
(अ.ह.उ. 39/15-23)

Ingredients-

1. Pathya (Haritaki) – 1000 in number
2. Dhatriphala (Amalaki) – 3000 in number
3. Bilva – 480 gm
4. Syonaka – 480 gm
5. Gambhari – 480 gm
6. Patala – 480 gm
7. Ganikarika (Agnimantha) – 480 gm
8. Salaparni – 480 gm
9. Prsniparni – 480 gm
10. Brhati – 480 gm
11. Kantakari – 480 gm

12. Goksura	–	480 gm
13. Bala	–	480 gm
14. Punarnava (Rakta punarnava)	–	480 gm
15. Eranda	–	480 gm
16. Masaparni	–	480 gm
17. Mudgaparni	–	480 gm
18. Satavari	–	480 gm
19. Meda	–	480 gm
20. Jivanti	–	480 gm
21. Jivaka	–	480 gm
22. Rsabhaka	–	480 gm
23. Sali	–	480 gm
24. Kasa	–	480 gm
25. Sara	–	480 gm
26. Darbha	–	480 gm
27. Iksu	–	480 gm
28. Water for decoction reduced to	–	120 L
29. Tvak	–	192 gm
30. Ela (Suksmaila)	–	192 gm
31. Musta (Musta)	–	192 gm
32. Rajani (Haridra)	–	192 gm
33. Pippali	–	192 gm
34. Agaru	–	192 gm
35. Candana (Sveta candana)	–	192 gm
36. Mandukaparni	–	192 gm
37. Kanaka (Nagakesara)	–	192 gm
38. Sankhapuspi	–	192 gm
39. Vaca	–	192 gm
40. Kaivartamusta (Plava)	–	192 gm
41. Yastyahvaya (Yasti)	–	192 gm
42. Vidanga	–	192 gm
43. Sitopala	–	48 kg
44. Sarpigrta	–	9.219 kg
45. Taila	–	6.144 kg
46. Ksudra	–	15.360 kg

Special method of preparation

Ripe fresh Haritaki and Amalaki are bundled in a piece of cloth. Ingredients 3 to 27 are caorsely powdered and put in a vessel. Water in the specified quantity is added and the bundle containing Haritaki and Amalaki is immersed by suspension in the vessel.

Dose– 12 g

Probable mode of action

Brahma Rasayana contains Amalaki which when these cooked well then these are taken out and tried well, sugar solution is made with kwath & sitopala and observed for Siddhi Lakshana. Now prakshepa is added. Honey is added after cooling act. as Vayahasthana and Rasayana. Besides it Mandukaparni Shankhapusi, Vaca and Madhuyasthi are present in the form of Prakhepa Drava these all four are Medhya Rasayana which may act on Manovaha srotas and Manas doshas and keep mind alert and efficient cognition.

Nutritional value

100 gm of Amalaki fruits contain–

Calories	–	44 Kcal
Total carbohydrate	–	10.189
Dietary fiber	–	4.309
Total fat	–	0.589
Vitamin C	–	27.70 mg
Thiamin	–	0.04 mg
Riboflavin	–	0.03 mg
Niacin	–	0.03 mg
Vitamin B6	–	0.80 mg
Panthothenic acid	–	0.29 mg
Iron acid	–	0.31 mg
Ca	–	25.00 mg

also contain P, Mn, Na, Zn, Cu etc.

100 gm of Ghrita –

Calories	–	900-903 calories
Fat	–	100 gm/100 gm
Vitamin A	–	315-375 mg/100 gm

100 gm of Honey has –

Calories	–	304

Carbohydrates	–	82 gm
Dietary fiber	–	0.2 gm
Protein	–	0.3 gm
Iron	–	0.42 mg

100 gm of Sugar has –

Calories	–	387
Carbohydrate	–	100 gm

100 gm of Tila taila–

Protein	–	19.17 gm
Total Fat	–	43.10 gm
Total Dietary Fibre	–	17.16 gm
Carbohydrate	–	9.76 gm
Energy	–	2161 KJ

Research update & Case study

Clinical study done by Sharma YK et.al on Brahma Rasayana to evaluate its anabolic potential in geriatric practice reveal that it has significant role on the most of the objective and subjective criteria. In this trial total volunteers were given Brahma Rasayan–1 in a dose of 10 gm twice daily win milk as a Anupana for forty five days and were followed up every fifteenth days. **Reference-** Sharma YK, Mishra A. Mankotia R. A clinical study on the Anabolic potential of Brahma Rasayana in Geriatric Practice. Annals of Ayurvedic Medicine Vol. I (3) Jul-Sep 2012:65-70.

8 CHAPT. Anupana Prayoga for Aushadhi Kalpa

Syllabus

1. **Kaishore Guggulu:** Sharangadhara Samhita, Madhyam khanda- 7/72-81, P: 1362.
2. **Yogaraja Guggulu:** Sharangadhara Samhita Madhyam khanda- 7/56-69, P:1353.
3. **Narayana Churna**: Sharangadhara Samhita Madhyam khanda- 7/83-91, P:123-124
4. **Rasa Sindoor:** Rasa Tarangini Hindi commentary of Sri Sadananda Sarma,Chaukhambha Surbharti, Murcchana vigyaniya Taranga, 6/203-234, P: 125-127.
5. **Rasa Parpati:** Rasa Tarangini of Sri Sadananda Sarma, Chaukhambha Surbharti Prakashan, Murcchana vigyaniya Taranga, 6/144-153, P: 116-117.
6. **Kankayan Vati**: Sharangadhara Samhita Surbharti Prakashan, Madhyam khanda, 7/50-55, P: 134-135)

Learning objective

1. Define and classify Anupana and Sahapana
2. Explain different factors to be considered for selection of Anupana as per Disease and Patients
3. Enlist different anupana for a single drug based on the condition of patient and disease. Elaborate with the help of examples of kalpas.
4. Describe value of proper selection of Anupanas with examples

Total - 5 hours (Lecture :01 hour, Non-lecture: 01 hours)

Marks- 5 marks, MCQ- Yes, SAQ (5 Marks)- Yes and LAQ (10 Marks)- No

अनुपानं हितं युक्तं तर्पयत्याशु मानवम्।
सुखं पचति चाहारायायुषे च बलाय च॥
(च.सू. 27/326)

Administration of Anupana (drinks) after food which is Hita (wholesome) and Yukta (appropriate nourishes) the human being, help in easy digestion of food for purpose of Ayusha (longevity) and Bala (strength).

Anupana (Varieties of drinks used after food)

यदाहारगुणैः पानं विपरीतं तदिष्यते।
अन्नानुपानं धातूनां दृष्टं यन्न विरोधि च॥
आसवानां समुद्दिष्टामशीतिं चतुरुत्तराम्।
जलं पेयमपेयं च परीक्ष्यानुपिबेद्धितम्॥
(च.सू. 27/319-320)

Qualities of Anupana (drinks after food) are opposite to those of food taken and at same time should not be opposite to Dhatu (tissues of the body). One can select proper type of Anupana with respect to condition, as a Anupana or Asava, Paniya, Apeya etc. can selected.

Dosha Bheda Anupana

स्निग्धोष्णं मारुते शस्तं पित्ते मधुरशीतलम्।
कफेऽनुपानं रूक्षोष्णं क्षये मांसरसः परम्॥
उपवासाध्वभाष्यस्त्रीमारुतातपकर्मभिः।
क्लान्तानामनुपानार्थं पयः पथ्यं यथाऽमृतम्॥
सुरा कृशानां पृष्ट्यर्थमनुपानं विधीयते।
कार्श्यार्थं स्थूलदेहानामनु शस्तं मधूदकम्॥
अल्पाग्नीनामनिद्राणां तन्द्राशोकभयक्लमैः।
मद्यमांसोचितानां च मद्यमेवानुशस्यते॥
(च.सू. 27/321-324)

S.No.	Condition	Anupana
1	Vata	Snigdha (unctuous) and Ushna (hot) Dravya
2	Pitta	Madhura Rasa (sweet) and Shita (cold) Dravya
3	Kapha	Snigdha (unctuous) and Ushna (hot)
4	Kshaya	Mamsa Rasa (meat soup)
5	Upavasa (fasting), Adhwa (long walk), Bhashya (long speeches), Stri (sex intercourse) and Maruta, Atapa (exposure to wind and sun)	Kshira (Milk)
6	Krusha (emaciated)	Sura
7	Sthula Deha (obese)	Madhudaka
8	Alpagni (suffering from loss of digestion), Anidra (insomnia), Tandra (drowsy), Shoka (grief), Bhaya (fear), Klama (tiredness without exercise)	Madya / Mamsa

Anupana Guna

अनुपानं तर्पयति, प्रीणयति, ऊर्जयति, बृंहयति, पर्याप्तिमभिनिर्वर्तयति, भुक्तमवसादयति, अन्नसङ्घातं भिनत्ति, मार्दवमापादयति, क्लेदयति, जरयति, सुखपरिणामिता-माशुव्यवायितां चाहारस्योपजनयतीति ॥ (च.सू. 27/325)

The common Karma (actions) and Guna (properties) of Anupana are it bring about Tarpayati (refreshment), Prinayati (gives pleasure), Ujayati (increase energy), Brmhayati (nourishment), Paryapta/ Trupti Abhinirvartayati (gives satisfaction) and Bhuktam Avasadayati (steadiness in the food eaten), Anna Sanghatam (helps in broke down), Mardavam Apadyati (softening), Kledayati (moistens the food), Jarayati (digest the food), Sukha Parinamitama Ashuvyavayitvama (proper spread digested food to entire body).

रोचनं बृंहणं वृष्यं दोषसङ्घात भेदनम् ।
तर्पणं मार्दवकरं श्रमक्लमहरं सखम् ॥
दीपनं दोषशमनं पिपासाच्छेदनं परम् ।
बल्यं वर्णकरं सम्यगनुपानं सदोच्यते ॥
(सु.सू. 46/442-43)

Rochana, Bruhana, Vrushya, Dosha Sanghata Bhedana, Tarpan, Mardavakara, Shrama Klamahara, Dipana, Doshapramana, Pipasa Nashaka and Bala Varna Kara.

Anupana is an adjunct administered either along with or just after the principal medicine to enhance its therapeutic action when administered with the principal medicine it is described as Sahapana, though in practice, the term Anupana connotes both.

Example-

सर्पिर्मधुभ्यां संयुक्ता सैव नेत्रामयञ्जयेत ।
(शा.म. 6/11)

Sarpi Madhu along with Triphala Churna for Netra Roga Nashaka.

चूर्णिता मधुना लीढा भेदिनी चाग्निवोधिनी ।
(शा.म. 6/37)

Pippali Churna with Madhu for Bhedana and Agnivardhaka.

कट्फलं पौष्करं कृष्णा शृङ्गी च मधुना सह ।
(शा.म. 6/42)

Bruhata Kataphaladi Churna with Madhu in Shwasakasahara

According to Aushadha Yoga (Sha.Ma.)

क्र. सं.	औषध योग का नाम	अनुपान	रोग में प्रयोग	सन्दर्भ
1	द्वितीय रसोन कल्क	एरण्ड क्वाथ	वात रोग	शा.म. 5/12
2	अपामार्ग कल्क	तण्डुल जल	रक्तार्श	शा.स. 5/19
3	लाक्षा कल्क	कूष्माण्ड स्वरस	रक्तक्षय	शा.स. 5/21
4	त्रिवृतादि कल्क	तक्र	कृमि रोग	शा.स. 5/26
5	शुण्ठी कल्क	मसूर यूष	संग्रहणी	शा.स. 5/28
6	सुदर्शन चूर्ण	शीताम्बु	सर्वज्वर	शा.स. 6/35
7	शुण्ठ्यादि चूर्ण	उष्ण अम्बु	आमातिसार	शा.स. 6/45
8	हरीतक्यादि चूर्ण	उष्णाम्बु	आमातिसार	शा.स. 6/46
9	लघुगंगाधर चूर्ण	तक्र गुड़	सर्व अतिसार	शा.स. 6/48
10	वृहद गंगाधर चूर्ण	क्षौद्र तण्डुल	प्रवाहिका	शा.स. 6/51
11	मरिचादि चूर्ण	तक्र	ग्रहणी	शा.स. 6/53
12	हपुषादि चूर्ण	उष्णोदक, गोमूत्र, दाडिम स्वरस आदि	अजीर्ण, उदर रोग	शा.स. 6/91-92
13	लवण त्रितय चूर्ण	पुराण मद्य, उष्णोदक तक्र आदि	यकृत प्लीहा रोग	शा.स. 6/102
14	तुम्बुरादि चूर्ण	उष्ण जल, यव क्वाथ	शूल	शा.स. 6/107
15	अजमोदाद्य चूर्ण	कोष्ण जल	आमवात	शा.स. 6/116
16	हिंग्वादि चूर्ण	जीर्ण मद्य, तक्र उष्णोदक	शूल	शा.स. 6/122
17	लवण भास्कर चूर्ण	मस्तु, तक्र, सुरा, आसव	ग्रहणी, गुल्म	शा.स. 6/142
18	पंचनिम्ब चूर्ण	खदिर क्वाथ	कुष्ठ	शा.स. 6/152
19	शतावरी चूर्ण	गोदुग्ध	बाजीकर	शा.स. 6/155
20	अश्वगन्धादि चूर्ण	गोदुग्ध	बाजीकर	शा.स. 6/157
21	नवायास चूर्ण	गोमूत्र, तक्र	पाण्डु रोग	शा.स. 6/161
22	मण्डूर वटक	तक्र	कामला	शा.स. 7/36
23	काङ्कायन गुटिका	मद्य, गोदुग्ध, गोमूत्र दशमूल उष्ट्री दुग्ध	विभिन्न प्रकार के गुल्म	शा.स. 7/54-55
24	योगराज गुग्गुलु	दार्वी क्वाथ, पाटला क्वाथ आदि	प्रमेह मूषिका विष आदि	शा.स. 7/67-68
25	कैशोर गुग्गुलु	कोष्ण जल, पय मंजिष्ठा क्वाथ	वातरक्त	शा.स. 7/76
26	काँचनार गुग्गुलु	मुण्डितका क्वाथ	गण्डमाला	शा.स. 7/99-100
27	कुटजावलेह	आज तक्र पय आदि	अर्श	शा.स. 8/44
28	कुब्जाष्टक अवलेह	छाग दुग्ध	अतीसार	शा.स. 8/48
29	बिन्दु घृत	गो दुग्ध, उष्ट्र दुग्ध	विरेचन	शा.स. 9/64-65

Anupana according to the disease- (Y.R.)

Anupana for some major diseases are as follows-

क्र.सं.	रोग	अनुपान
1.	ज्वर	किराततिक्त, पर्पटक
2.	ग्रहणी	तक्र
3.	अतिसार	कुटज, त्वक् क्वाथ
4.	कृमि रोग	विडङ्ग चूर्ण
5.	अर्श	भल्लातक एवं चित्रक
6.	पाण्डु	मण्डूर भस्म
7.	श्वास, कास	भार्ङ्गी, शुण्ठी
8.	प्रमेह	आमलकी स्वरस, हरिद्रा चूर्ण
9.	रक्त पित्त	वासा स्वरस
10.	अपस्मार	वचा एवं ब्राह्मी स्वरस
11.	वातरक्त	गुडुची स्वरस
12.	अम्ल पित्त	द्राक्षा
13.	उन्माद	पुराण सर्पि
14.	कुष्ठ	खदिर क्वाथ
15.	हिक्का	लाक्षा रस

आचार्य सुश्रुत द्वारा वर्णित आहारवर्गों का अनुपान—

क्र.सं.	आहार वर्ग	अनुपान	सन्दर्भ
1	शूकधान्य, कुधान्य,	बदराम्ल	सु.सू. 46/448
	शमीधान्य		
2	कलाय आदि	धान्याम्ल	सु.सू. 46/448
	द्विदल धान्य		
3	जांगल मांस	पिप्पल्यासव	सु.सू. 46/448
4	अम्ल फल	पद्मोत्पलकन्दासव	सु.सू. 46/448
5	कषाय	दाडिमवेत्रासव	सु.सू. 46/448
6	मधुर	त्रिकटु युक्त खण्डासव	सु.सू. 46/448
7	तालफल आदि	धान्याम्ल	सु.सू. 46/448
8	कटु	दूर्वानलवेत्रासव	सु.सू. 46/448
9	पिप्पली आदि	श्वदंष्ट्रावयुकासव	सु.सू. 46/448
10	कूष्माण्डादी	दार्वीकरीरासव	सु.सू. 46/448
11	चुच्चु आदि	लोध्रासव	सु.सू. 46/448
12	जीवन्त्यादि, कुसुम्भशाक	त्रिफलासव	सु.सू. 46/448
13	मण्डूकपर्णी आदि	महापञ्चमूलासव	सु.सू. 46/448
14	तालमस्तक	अम्लफलासव	सु.सू. 46/448
15	सैन्धवादीनां	सुरासव, आरनाल	सु.सू. 46/448

Importance of Anupana

यथा तैलं जले क्षिप्तं क्षणेनैव प्रसर्पति।
अनुपान बलादङ्गे तथा सर्पति भेषजम्॥
(शा.म. 6/5)

Anupana facilitate the absorption of the drug like oil spread quickly on the surface water. As oil added to water spreads quickly on the surface of water, so the Aushadha along with the Anupana spreads in the body and produces its effect when administered with appropriate Anupana.

Kaishore Guggulu
Sharangadhara Samhita, Madhyam Khanda- 7/72-81, p: 1362.

त्रिफलायास्त्रयः प्रस्थाः प्रस्थैका चामृता भवेत्॥
संकुट्य लोहपात्रे तु सार्धद्रोणाम्बुना पचेत्।
जलमर्धशृतंज्ञात्वा गृह्णीयाद्वस्त्रगालितम्॥
ततः क्वाथे क्षिपेच्छुद्धं गुग्गुलुंप्रस्थसम्मितम्।
पुनः पचेदयःपात्रे दर्व्या सङ्घट्टयेन्मुहुः॥
सान्द्रीभूतं च तं ज्ञात्वा गुडपाकसमाकृतिम्।
चूर्णीकृत्य ततस्तत्र द्रव्याणीमानि निक्षिपेत्॥
त्रिफला द्विपला ज्ञेया गुडूची पलिका मता।
षडक्षंत्र्यूषणं प्रोक्तं विडङ्गानां पलार्धकम्॥
दन्ती कर्षमिता कार्या त्रिवृत्कर्षमिता स्मृता।
ततः पिण्डीकृतं सर्वं घृतपात्रे विनिक्षिपेत्॥
गुटिकाः शाणमात्रेण युञ्ज्याद् दोषाद्यपेक्षया।
अनुपाने भिषग्दद्यात्कोष्णं नीरं पयोऽथवा॥
मञ्जिष्ठादिशृतं वाऽपि युक्तियुक्तमतः परम्।
जयेत्सर्वाणि कुष्ठानि वातरक्तं त्रिदोषजम्॥
सर्वव्रणांश्च गुल्मांश्च प्रमेहपिडिकास्तथा।
प्रमेहोदरमन्दाग्निकासश्वयथुपाण्डुजान्॥
(शा.सं.म.ख. 7/70-78)

Ingredients and method of preparation

Three Prasthas of Triphala, one Prastha of

Amruta are to be boiled in an iron vessel with one and half Dronas of water, decoction reduced to half and filtered through cloth. One Prastha of (purified) Guggulu is added to the decoction stirring all the while with iron laddle. When the mass begins to solidify the powder of the following drugs are added-two Palas of Triphala, one Pala of vidanga, one Karsha each of Danti and Trivrut. The mass is then transferred to a pot containing a little quantity of ghee and when slightly cool rolled into pills of one Shana each. Administered along with warm water, milk or Manjisthadi Kwatha.

Indications- All types of Kushta, Vatarakta, Gulma, Prameha Pidika, Prameha, Udara, Mandaagni, Kasa, Shotha of Pandu Roga,

Anupana

कैशोरकाभिधानोऽयं गुग्गुलुः कान्तिकारकः ॥
वासादिना नेत्रगदान्गुल्मादोन्विरुणादिना ।
क्वाथेन खदिरस्यापित्रणकुष्ठानि नाशयेत ॥
अम्लं तीक्ष्णमजीर्णं च व्यवायं श्रममातपम् ।
मद्यंरोषं त्यजेत्सम्यग्गुणार्थी पुरसेवकः ॥

(शा.सं.म.ख. 7/ 79-81)

Anupana	Roga
Vasadi Kwatha	Netra Roga
Varunadi Kwatha	Gulma
Khadira Kwatha	Vrana and Kustha Roga

Dosha- Tridoshajahara

Contraindications- avoid in Mandagni, food which are Amala and Tikshna, Vyavaya, Shrama, Atapa Sevana, Madya, anger.

Yogaraja Guggulu
Sharangadhara Samhita Madhyam khanda- 7/56-69, P:1353.

नागरं पिप्पलीमूलं पिप्पली चव्यचित्रकौ ।
भृष्टं हिङ्ग्वजमोदा च सर्षपो जीरकद्वयम् ।
रेणुकेन्द्रयवाः पाठा विडङ्गं गजपिप्पली ॥
कटुकाऽतिविषा भार्ङ्गी वचा मूर्वेति भागतः ।
प्रत्येकं शाणिकानि स्युर्द्रव्याणीमानि विंशतिः ॥
द्रव्येभ्यः सकलेभ्यश्च त्रिफला द्विगुणा भवेत् ।
एभिश्चूर्णीकृतैः सर्वैः समो देयश्च गुग्गुलुः ॥
वङ्गंरौप्यं च नागं च लोहसारस्तथाभ्रकम् ।
मण्डूरं रससिन्दुरं प्रत्येकं पलसम्मितम् ॥
गुडपाकसमं कृत्वा इमं द्याद्यथोथितम् ।
एकपिण्डं ततः कत्वा थारयेद् घृतभाजने ॥
गुटिकाः प्राणमावास्तु कृत्या ग्राह्या यथोचिताः ।
गुग्गुलुर्योगराजोऽयं त्रिदोषघ्नो रसायनः ॥

(शा.सं.म.ख. 7/ 56-62)

Nagara, Pippali, Chavya, Pippalimula, Chitraka, fried Hingu, Ajamoda, Sarshapa, the two Jirakas, Renuka, Indrayava, Vidanga, Gajapippali, Katuka, Ativisha, Bharngi, Vacha, Murva-these twenty- each one Shana; Triphala double the total quantity and Guggulu equal to the total of all-are taken, nicely, powdered, put in a pot containing a little quantity of ghee, cooked well and rolled into pills of one Shana in quantity.

Indications

प्रमेहं वातरक्तं च नाभिशूलं भगन्दरम् ।
उदावर्तं क्षयं गुल्ममपस्मारमुरोग्रहम् ॥
मन्दाग्नि श्वासकासं च नाशयेदरुचि तथा ।
रेतोदोषहरः पुंसां रजोदोषहरः खियाम् ॥

(शा.सं.म.ख. 7/ 64-65)

In all types of Vata Vyadhi, Kushta, Prameha, Vatarakta, Nabhishula, Bhagandara, Gulma, Apasmara, Urograha, Mandagni, Shwasa, Kasa, Aruchi, Reta and Rajo Dosha.

Anupana

रास्नादिक्वाथसंयुक्तो विविधं हन्ति मारुतम ।
काकोल्यादिशृतात्पित्तं कफमारग्वधादिना ॥
दार्वीशृतेन मेहांश्च गोमूत्रेण च पाण्डुताम् ।
मेदोवृद्धिं च मधुना कुष्ठं निम्बशृतेन वा ॥
छिन्नाक्वाथेन वातारस्त्रं शोथं शूलं कणाशृतात् ।
पाटलाक्वाथसहितो विषं मूषकजं जयेत् ॥
त्रिफलाक्वाथसहितो नेत्रार्तिं हन्ति दारुणाम् ।
पुनर्नवादिक्वाथेन हन्यात्सर्वोदरान्यपि ॥

(शा.सं.म.ख. 7/ 66-69)

Anupana	Roga Prayoga
Rasnadi Kwatha	All types Vata Vyadhi
Kakolyadi Kwastha	Pittaja Roga

Aragvadhadi Kwatha	Kaphaja Roga
Darvi Kwatha	Meha
Pandu	Gomutra
Medovruddhi	Madhu
Nimba Kwatha	Kushta
Guduchi Kwatha	Vatarakta
Pippali Kwatha	Shotha, shula
Patala Kwatha	Mushaka Visha
Triphala Kwatha	Netra Roga
Punarnavadi Kwatha	Udara Roga

Dosha- Tridoshaghna

Contraindications- Maithuna and food is not necessary.

Narayana Churna Sharangadhara Samhita Madhyam khanda- 7/83-91, P:123-124

चित्रकं त्रिफला व्योषं जीरकं हपुषा वचा।
यवानी पिप्पलीमूलं शतपुष्पाऽजगन्धिका॥
अजमोदा शटी धान्यं विडङ्ग स्थूलजीरकम्।
हेमाह्वा पौष्करं मूलं क्षारौ लवणपञ्चकम्॥
कुष्ठं चेति समांशानि विशाला स्याद् द्विभागिका।
त्रिवृत्त्रिभागा विज्ञेया दन्त्या भागत्रयं भवेत्॥
चतुर्भागा शातला स्यात्सर्वाण्येकत्र चूर्णयेत्।
पाचनस्नेहनाद्यैश्च स्निग्धकोष्ठस्य रोगिणः॥
दद्याच्चूर्ण विरेकाय सर्वरोगप्रणाशनम्।
हृद्रोगे पाण्डुरोगे च कासे श्वासे भगन्दरे॥
मन्देऽग्नौ च ज्वरे कुष्ठे ग्रहण्यां च गलग्रहे।

(शा.सं.म.ख. 6/ 81-84)

Anupana	Roga Prayoga
Gulma	Badara Jala
Atisara	Dadhi Mastu
Ajirna	Ushnambhu
Parikartika	Amlavetasa
Udara Roga	Ushtra Dugdha/ Takra
Vata Roga	Prasanna
Arsha	Dadima Swarasa
Sthavara Visha and Jangama Visha	Ghruta

Rasa Sindoor

Rasa Tarangini Hindi commentary of Sri Sadananda Sarma, Chaukhambha Surbharti, Murcchana vigyaniya Taranga, 6/203-234, P: 125-127.

जातपुष्पतुलसीदलद्रवैःशृंगवेरजरसेन वा सदा।
नागिनीस्वरसकेन वा भिषक योजयेद्रसमिमं नवज्वरे॥
छिन्नोद्भवापर्पटधान्यकानां क्वाथेन तुर्यांशसमाहितेन।
कान्तालललाटाभरणं रसेशं जीर्णज्वरे वैद्यवरः प्रदद्यात्॥
मेहे गुडूचीस्वरसेन दद्यात् योषित्प्रियामूलजतोयकैर्वा।
असृग्दरेऽशोकबलादिकानां काथेन सिन्दूररसः प्रयोज्यः॥
बालाभयायाः क्वाथेन बुधोऽर्शसि नियोजयेत्।
वचारसेन तच्चूर्णं वापस्मारे प्रयुज्यते॥
कूष्माण्डस्वरसेनेह दद्यादुन्मादसंज्ञके।
श्वासे विभीतकक्वाथैर्वासायाः स्वरसेन वा॥
कामलायां बुधो दद्यात् दार्वीक्वाथेन संयुतम्।
पांडुरोगे प्रयुञ्जीत रसज्ञो लोहभस्मना॥
सितोपला च सूक्ष्मैला शिलाजञ्च समं समम्।
एतस्त्रितयचूर्णन मूत्रकृच्छ्रकुलान्तकः॥
अजीर्णे मधुना वापि मुस्तकक्वाथजैर्द्रवैः।
शूले वैद्यवरो दद्यात् त्रिफलाक्वाथसंयुतम्॥
कणाचूर्णयुतः सूतः प्रदद्यात् रक्तिकोन्मितः।
सेवितो नाशयेन्मूर्च्छां पथ्यं तोयावगाहनम्॥
वमने बृहदेलायाः क्वाथेन मधुनापि वा।
शोथे पुनर्नवायास्तु कषायेण प्रयोजयेत्॥
गुडूचीनिम्बखदिरपुरुहूतफलद्रवैः।
कवाथैर्वा संयुतश्चन्द्रचातुर्जातकमिश्रितः॥
रससिन्दूरसंज्ञोऽयं प्रयुक्तो रक्तिकोन्मितः।
विस्फोटं दारुणां हन्याद्यथा सूर्यस्तमस्ततिम्॥
काकोली चूर्णसंयुक्तं नारिकेलोत्थतैलयुग्।
सेवितं रससिन्दूरं हरेद्रोगं जरायुजम्॥
मृतवंगसमायुक्तो रसः सिन्दूरसंज्ञकः।
क्षौद्रेण भक्षितो हन्ति प्रमेहं त्वतिकालजम्॥
सक्षौद्रैस्त्र्यूषणोपेतैर्धान्यजीरकनागरैः।
सेवितो रससिन्दूरो वान्तिं जयति दारुणाम्॥
ब्राह्मीवचाशङ्खपुष्पीकुष्ठैलाक्वाथसंयुतम्।
रक्तिकांद्वितयं खादेदपस्मारहरं परम्॥
धात्रीवयस्याकलिपादपानां क्वाथेन वा जन्तुरियोः समेतः।
नित्यं तु सिन्दूररसो रसज्ञैः भगन्दरेऽयं विनियोजनीयः॥
मिशिबालाभयाक्वाथैर्यवानीचूर्णकेन वा।
बिडाख्यलवणेनैव गुल्मे वा विनियोजयेत्॥
क्वाथेन दशमूलस्य शिरःशूले प्रयोजयेत्।

व्रणेषु बृहतीनीरगुडूचीविश्वभेषजैः ॥
गुडूचिकाशतावरीकणारसाभयान्वितैः ।
वचाब्द्विश्वभेषजैः कषायकं प्रकल्पयेत् ॥
रसोऽत्र तेन संयुतो यथाविधि प्रयोजितः ।
निहन्ति वै चिरोत्थितं प्रकाममामवातकम् ॥
शाल्मलीमूलचूर्णेन विदार्यादिगणेन वा ।
प्रयुक्तो रससिन्दूरो वाजीकरण उत्तमः ॥
भस्मना गगनस्येह काञ्चनेन मृतेन वा ।
उभाभ्यामेव वा युक्तो धातुवृद्धिकरो मतः ॥
जातीफलं देवपुष्पं कर्पूरञ्चाहिफेनकम् ।
एषां चूर्णेन सहितो स्वप्रमेहहरो मतः ॥
बलाक्वथिततोयेन सिन्दूररससेवनात् ।
विनश्यति चिरोद्भूतं शीर्षकम्पनमुद्धतम् ॥
जरणाञ्यूषणक्षुद्रापथ्याधानेयकैः समम् ।
निषेवितोऽयं सिन्दूरो वान्तिशान्तिकरो मतः ॥
हिङ्गुदीप्यकशुण्ठीभिश्चव्यधान्याकरुच्यकैः ।
प्रयुक्तो रससिन्दूरो द्रुतं पानात्ययं जयेत् ॥
चव्यटंकणसंयुक्तः शीलितोदिनसप्तकम् ।
रसः सिन्दूरसंच्चोऽयं पक्तिशूलं विनाशयेत् ॥
वासाकषायसहितो लोध्रक्वाथान्वितोऽथवा ।
शीलितो रससिन्दूरो रक्तप्रदरमुद्धरेत् ॥
बराक्वाथेन वा गहनीरेण सहसैन्धवम् ।
शीलितो रससिन्दूरो शिशूनां सुरसारसैः ॥
कासे श्वासे च वितरेत् कण्टकारीरसेन च ।
परिच्छेदो न विज्ञेयः सहपानानुपानयोः ॥
प्रकल्पवेद यथारोगं सिद्धस्तो भिषग्वरः ॥

Roga	Anupana
Nava Jwara	Tulasi Swarasa, Adraka Swarasa
Jirna Jwara	Guduchi, Parpataka, Dhanyaka Kwatha
Prameha	Guduchi Swarasa, Haridra Swarasa
Pradara Roga	Ashoka, Bala, Lodra, etc Grahi and Shotha Dravya
Arsha	Haritaki Kashaya
Apasmara	Vacha Churna
Unmada	Kushmanda Swarasa
Shwasa	Bibhitaki Vasa Swarasa
Kamala Roga	Darvi Kwatha
Pandu Roga	Loha Bhasma
Mutrakruccha	Sitapala, Ela Churna, Shilajatu, Shita Dugdha
Ajirna	Madhu and Musta Kwataha
Udara Shula	Triphala Kwatha
Murccha Roga	Pippali Churna with Madhu
Vamana	Ela Kwatha and Madhu
Sarvanga Shotha	Punarnava Kwatha
Visphoata Roga	Chaturjataka, Guduchi, Nimba, Kadira and Indraja Kwatha.
Garbhashaya	Kakoja Churna, Narekela Taila
Jirna Prameha	Vanga Bhasma, Madhu
Severe Vamana	Trikatu Churna, Dhaniya, Jiraka Churna, Madhu
Apasmara Roga	Brahmi, Vacha, Sankhapuspi, Koshtha, Ela Kashaya
Bhagandara	Amalaki, Haritaki, Bibhitaki and Vidanga
Gulma	Haritaki and
Vata Kaphat-maka Shirashula	Dashamula Kashaya
Dushta Vrana	Kanthakari, Sugandhabala, Guduchi, and Shunthi Kashaya
Jirna Amavata	Guduchi,
Vajikarana	Shalmali Mula Churna and Vidaryadi Gana
Dhatuvruddhi	Abhraka and Swarna Bhasma
Swapna Meha	Jatipala, Lavanga, Karpura and Ahiphena
Shirakampa	Bala Kwatha
Vamana	Jiraka, Trikatu, Haritaki and Dhanyaka
Madatyaya	Hingu, Ajamoda, Shunthi, Chavya, Dhaniya and Saindhava Lavana
Parinama Shula	Yava Kshara
Rakta Pradara	Vasa Kashaya and Lodhra Kashaya
Basti Kundala	Triphala Kwatha or Kanji
Bala Nava Jwara and Pratishyaya	Tulasi Swarasa

Bala Shwasa and Kasa	Kanthakari Swarasa

Rasa Parpati

Rasa Tarangini of Sri Sadananda Sarma, Chaukhambha Surbharti Prakashan, Murcchana vigyaniya Taranga, 6/144-153, P: 116-117.

रसपर्पटिका साज्यमुन्मादमिह नाशयेत् ॥
ब्राह्मीरससमायुक्ता गुञ्जाष्टकमिताशिता ।
रसपर्पटिका काममपस्मारं निवारयेत् ॥
रामठेनार्धगुञ्जेन सगुञ्जाष्टकजीरका ।
रसपर्पटिका भुक्ता ग्रहणी हन्ति दारुणाम् ॥
व्योषनिम्बुदलोपेता भक्षिता रसपर्पटी ।
सप्ताहद्वितयेनैव त्वपस्मारं विनाशयेत् ॥
वर्धमानक्रबीजोत्थतैलेन परिशीलिता ।
शूलं गुग्गुलुना पाण्डुशोफं हन्यात्तु पर्पटी ॥
धूर्तबीजसमायुक्ता रसपर्पटिकाशिता ।
गुञ्जापञ्चकमात्रन्तु हन्त्युन्मादं विशेषतः ॥
गोमूत्रेण समायुक्ता रसपर्पटिकाशिता ।
मासमात्रप्रयोगेण नाशयेद् गुदजामयम् ॥
निम्बपञ्चकभल्लातवाकुचीभृङ्गसंयुता ।
निहन्ति सर्वकुष्ठानि रसपर्पटिकाशिता ॥
दशमूलकषायेण शीलिता रसपर्पटी ।
विनाशयेद्विशेषेण दारुणं वातिकं ज्वरम् ॥

(R.T. 6/144-153)

Roga	Anupana
Unmada	Rasna Mula Churna along with Ghruta
Apasmara	Brahmi Swarasa
Dusadhya Grahani	Shweta Jiraka Churna
Apasmara	Trikatu Churna and Nimbu Patra Kalka
Udara Shula	Eranda Beeja Taila
Unmada	Dhattura Beeja Churna
Arsha	Gomutra
Kushta	Nimba Panchanga, Shuddha Bhallataka, Bakuchi
Vataja Jwara	Dashamula Kashaya
Kaphaja Kasa	Trikatu Churna

Kankayan Vati Sharangadhara Samhita Surbharti Prakashan, Madhyam khanda, 7/50-55, P: 134-135)

हिङ्गु षट्शाणिकं कार्यं क्षारौ लवणपञ्चकम् ।
त्रिवृच्चाष्टमितैः शाणैः प्रत्येकं कल्पयेत्सुधीः ॥
दन्ती शटी पौष्करं च विडङ्गं दाडिमं शिवा ।
चित्रोऽम्लवेतसः शुण्ठी शाणैः षोडशभिः पृथक् ॥
बीजपूररसेनैषां गुटिकां कारयेद् बुधः ।

(शा.सं.म.ख. 7/ 50-52)

Ingredients

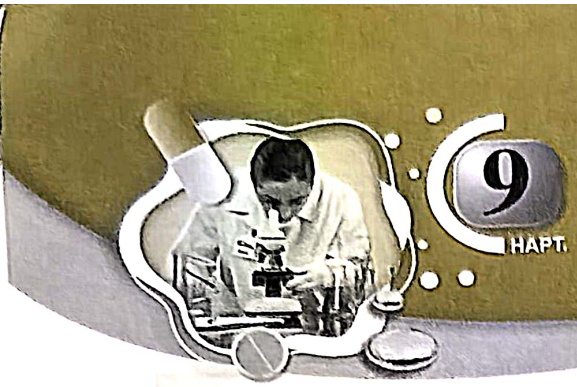
Four Shana each of Yavani, Jiraka, Dhanya, Maricha, Girikarnika, Ajamoda and Upakunchi, six Shana of each Hingu,, eight Shana each of Kshara, five Lavana and Trivruta, sixteen Shana each of Danti, Shathi, pushkara, Vidanga, Dadima, Shiva, Chitraka, Amalavetsa and Shunthi all are nicely powdered, macerated with juice of Bijapura and rolled into pills.

Anupana

घृतेन पयसा मद्यैरम्लैरुष्णोदकेन वा ॥
पिबेत्काङ्क्षायनप्रोक्तां गुटिकां गुल्मनाशिनीम् ।
मद्येन वातिकं गुल्मं गोक्षीरेण च पैत्तिकम् ॥
मूत्रेण कफगुल्मं च दशमूलैस्त्रिदोषजम् ।
उष्ट्रीदुग्धेन नारीणां रक्तगुल्मं निवारयेत् ॥
हृद्रोगं ग्रहणीं शूलं कृमीनर्शांसि नाशयेत् ॥

(शा.सं.म.ख. 53-55)

Roga	Anupana
Gulma	Madya, Amla, Ushnodaka
Vataja Gulma	Madya
Pittaja Gulma	Godugdha
Kaphaja Gulma	Gomutra
Tridoshaja Gulma	Dashamula Kwatha
Raktaja Gulma	Ushtra Dugdha
Hrudaroga, Grahani, Shula, Krimi and Arsha	Ghruta, Paya, Madya, Amla, Ushnodaka



CHAPTER 9

Aushadhi Prayoga Marga

Syllabus

Introduction, Types in ayurveda, Advantages and disadvantages of each Aushadhi Prayoga Marga and probable mode of action after administration of following dosage forms in below mentioned routes

1. **Mukha (Oral Cavity):** Vati, Gutika, Churna, Asava, Arishta,Kashaya, Avaleha, Khanda, Sneha (Ghrita/Taila),
2. **Nasa (Nasal Route)-** Dosage form used - Churna, taila, swarasa, arka
3. **Karna (Through Ear)-** Taila, Ghrita
4. **Akshi (Through Eyes)-** Ghrita, Taila,
5. **Twak (Through Skin)-** Lepa, Alepa, Pralepa, Malahara, upanaha,pradeha, abhyanga, udvartana
   - Shirodhara - Takra
   - Abhyanga- Sahacharadi Taila
   - Ashti Bhagna- Murivenna Taila
   - Vrana- Jatyadi Taila
   - Smashru – Shankha Bhasma
   - Kesha Ghanata- Bringaraja Taila
   - Akala Palita – Hasthi Danta Masi
   - Indralupta – Icchabhedi Rasa
   - Lomashatana – Lomashatana Lepa
6. **Guda (Anal Route)**- Dosage forms - Vartis, taila, ghrita, kalka, churna, Kashaya
7. **Mutra Marga (Through urethra)**- Uttara Basti with Dosage forms- Taila, Ghrita
8. **Yoni Marga (Through vagina)-** Yoni Dharana, Yoni Dhavana, Yoni Pichu, Yoni Dhoopana

Learning objectives

1. Discuss the various types of Aushadhi Prayog Marga (route of drug administration).
2. Describe the advantages and disadvantages of each Aushadhi Prayog Marga.
3. Enlist the dosage forms used in the specific Aushadhi Prayog Marga.
4. Discuss the nature of drug (s) administered in various routes of drug administration.
5. Appraise administration of drugs through various routes mentioned in Ayurvedic treatment

Total - 6 hours (Lecture :05 hour, Non-lecture: 01 hours)
Marks- 5 marks, MCQ- Yes, SAQ (5 Marks)- Yes and LAQ (10 Marks)- No

Introduction

The dosage form is the finished product of a drug, which can be administered into the body through various channels. Various dosage forms of Ayurveda Swarasa, Kalka, Kashaya, Hima, Phanta Churna, Avaleha, Asava, Arishta, Gutika,

Guggulu, Vati, Vataka, Taila, Ghrita, Arka, Upanaha, Lepa, Malahara, etc. Dosages can be classified into three groups;

- **Solid Dosage Forms:**- Gutika, Vati (Tablets, Pills, Capsules), Khanda (granules), Guggulu, Vartis (suppositories), Kshara (alkaline preparation), Lavana Churna etc.
- **Semi-solid Dosage Forms :-** Avaleha (confection), Lepa, (ointments, paste, gels, vaginal pessaries, emulsions etc.).
- **Liquid Dosage Forms:-** Swarasa (juices), Kashaya (decoction), Hima Phanta Asava, Arista (alcoholic preparation), Arka (distillates), Taila (oil). Ksheera paka, Panaka, Sharkara etc.

These dosage forms are administered in the body by various routes called as Aushadha Prayoga Margas as explained in the various classical texts. Path by which a drug other substances is brought into contact with the body can be defined as route of drug administration. Depending upon the pre dominant Dosha involvement in the manifestation of a particular disease, these route can be adopted for administration. The route of drug administration can be explained as 8 Srotas (channels) in Ayurveda are as:-

स्रोतांसि नासिके कर्णौ नेत्रे पाय्वास्यमेहनम्।
स्तनौ रक्तपथश्चेति नारीणामधिकंत्रयम्॥
(अ.सं.शा. 3/40-41)

1. Mukha (Mouth)
2. Netra (Nose)
3. Karna (Ear)
4. Akshi (Eye)
5. Twak (Skin),
6. Guda (Rectum)
7. Mutra Marga (Urethra)
8. Yoni Marga (Vagina)

1. Mukha (Oral route)

Advantages: It is convenient and can be self-administered, pain free, easy for consumption, easy to carry. Absorption takes place along the whole length of GIT. It is also cost effective compared to most other route.

Disadvantages: Sometimes inefficient and causes irritation to gastric mucosa, less palatability of some drugs and slow absorption. These drugs passes through first pass metabolism casing delayed action in some condition. This route can not be used in unconscious patients

Only part of the drug may be absorbed, causes nausea, vomiting and cannot be used in emergencies.

Probable mode of action of oral route drug Administration

Dosage forms which are administered through oral route like Vati, Gutika, Churna, Asava, Arishta, Kashaya, Avaleha, Khanda, Sneha (Ghrita/Taila), Arka etc.

The oral route is the most common route of drug administration. The drug is given by mouth. Absorption of drug may begin in oral cavity after intake of Avaleha (due to licking) and Vati (chewable) and when it reaches into gastro intestinal track the major absorption of drug and its assi

2. Nasa (Nasal route)

Advantages: It provides rapid delivery of a drug across the large surface area of the mucous membrane of the respiratory tract and pulmonary epithelium. This route of administration is mainly used for drugs that are oil ligand gases or those dispersed in an aerosol form. This route is particularly effective & convenient for patients with respiratory complaints because the drug is delivered directly to the site of action and systemic side effects are minimized.

Disadvantages: Some time due to bad smell it may cause nausea, vomiting – like Anu-Taila. Some time it may causes irritation to the nasal mucosa like Pradhamana Nasya.

Probable mode of action of nasal route drug Administration

Nasal dosage forms are proposed for instillation

into the nostrils, used for antiseptic, local and analgesic or vasoconstrictor property. As the nasal mucosa which is rich in blood supply with larger surface area, porous endothelial membrane, due to bio adhesive property it is very helpful in the absorption of the medicines instilled through nose. It provides rapid delivery of a drug across the large surface area of the mucous membrane of the respiratory tract and pulmonary epithelium.

Dosage form which are used by Nasal Route– Churna, Taila, Swarasa, Arka.

3. Karna (Ear)

Advantages- Easy administration, drug administered to the site directly.

Disadvantages- Co-operation of the patient required, difficult to administer in children

Probable mode of actions of Ear Route drug Administration

Ghrita and Taila can be used in the form of Karna Puran, Karna Dhavana etc. in Karna Rogas in order to get them absorbed quickly a sufficient contact time should be provided.

Dosage form which are used by Ear Route– Ghrita and Taila (Like Bilvadi Taila)

4. Akshi (Eyes)

Advantages- Fast absorption of the drug, drug administration is done on the site of the disease hence shows quick results.

Disadvantages - Difficult to carry out these procedures in children, co-operation of the patient is necessary.

Probable mode of action

The medicines are instilled into the eyes are the ophthalmic administration. The cornea, conjunctiva, anterior chamber and iris usually respond to topical therapy. As the skin over the eyelid is a very thin membrane hence the absorption of the drug is much faster. In case where the systemic treatment fail to cross the blood ocular barriers the local effect of drugs are seen topically.

Dosage form which are used by Eye Route- Ghrita, Taila, Netra Drava.

5. Twak (dermal)

Advantages- Lower risk of side effect, user friendly, can be used for all age patients.

Disadvantages- Local therapeutic effect, not well absorbed into the deeper layers of the skin or mucous membrane.

Probable mode of action

Skin is the outermost covering of the human body which protects the other tissues and organs. The superficial layers epidermis, the stratum corneum, the basal epidermal layers and the underlying dermis are readily permeable, with passive diffusion process. Drugs with low molecular weight with a high water and lipid solubility show the greatest penetration affecting the absorption of the drug.

Dosage form which are used by dermal route are Lepa, Alepa, Pralepa, Malahara, Upanaha, Pradeha, Abhyanga, Udvartana etc.

Shirodhara Through Takra

Probable mode of action of Shirodhara by Takra– Takradhara is the unique procedure for all types of Manasa doshas. When Takra is poured in a continuous stream over the forehead it might stimulate the Marmas, Marmas are the Pranas and it may be correlated with vital energy of body. Marmas located in the heads are the Apanga, Avarta, Shanka, Utkshepa, Seemanta and Sthapani. Takradhara improves Marmas circulation which in turn improves the blood circulation of the brain.

Abhyanga

Sahacharadi Taila

समूलशाखस्य सहाचरस्य तुलां समेतां दशमूलतश्च।
पलानि पञ्चाशदभीरुतश्च पादावशेषं विपचेद्वहेऽपाम्॥
तत्र सेव्यनखकुष्ठहिमैला स्पृक्प्रियङ्गुनलिकाम्बुशिलाजैः।
लोहितानलदलोहसुराह्वैः कोषनामिशितुरुष्कनतैश्च॥
तुल्यक्षीरं पालिकैस्तैलपात्रं सिद्धं कृच्छ्रान् शीलितं हन्ति

वातान् । कम्पाक्षेपस्तम्भशोषादियुक्तान् गुल्मोन्मादौ पीनसं योनिरोगान् ॥ (अं.ह.चि. 21/66-68)

1. Sahachara	–	4.800 kg
2. Bilva	–	480 gm
3. Syonaka	–	480 gm
4. Gambhari	–	480 gm
5. Patala	–	480 gm
6. Ganikarika (Agnimantha)	–	480 gm
7. Salaparni	–	480 gm
8. Prsniparni	–	480 gm
9. Brhati	–	480 gm
10. Kantakari	–	480 gm
11. Goksura	–	480 gm
12. Abhiru (Satavari)	–	2,400 kg
13. Water for decoction	–	49.152 L
reduced to	–	12.288 L
14. Sevya (Usira)	–	48 gm
15. Nakha (Vyaghranakha)	–	48 gm
16. Kustha	–	48 gm
17. Hima (Sveta candana)	–	48 gm
18. Ela (Suksmaila)	–	48 gm
19. Sprk (Sprkka)	–	48 gm
20. Priyangu	–	48 gm
21. Nalika	–	48 gm
22. Ambu (Hrivera)	–	48 gm
23. Silaja (Saileya)	–	48 gm
24. Lohita (Manjistha)	–	48 gm
25. Nalada (Jatamamsi)	–	48 gm
26. Loha (Agaru)	–	48 gm
27. Surahva (Devadaru)	–	48 gm
28. Kopana (Coraka)	–	48 gm
29. Misi (Misreya)	–	48 gm
30. Turuska	–	48 gm
31. Nata (Tagara)	–	48 gm
32. Ksira (Godugdha)	–	3.0721 L
33. Taila (Tila)	–	3.0721 L

Note– This Taila is also prepared by boiling 101 times like Ksirabala taila.

Dose– 6 to 12 gm used externally for Abhyanga also

Anupana– Milk, warm water

Important Therapeutic uses– Vata Vyadhi (Disease due to Vata dosa), Kampa (Tremor), Gulma (Abdominal lump), Unmada (Mania/Psychosis), Pinasa (Chronic rhinitis/Sinusitis), Yoniroga (Disease of female genital tract), Aksepa (Convulsions), Urustambha (Stiffness in thigh muscles), Shósha (Cachexia).

Ashti Bhagna

Murivenna Taila

(The Pharmacopoeia of Govenrment Ayurveda College, Tiruvanthapuram)

1. Narikela	Cocos nucifera	–	768 ml
2. Tambula	Piper betle	–	384 gm
3. Sigrupatra	Moringa oleifera	–	384 gm
4. Paribhadra Patra	Erythrina indica	–	384 gm
5. Kanya	Aloe barbadensis	–	384 gm
6. Karanja Patra	Pongamia pinnata	–	384 gm
7. Buka	Spermacoce hispida	–	384 gm
8. Palandu	Allium cepa	–	384 gm
Swarasa (2-8)		–	3.072 L
9. Tandulambu	Oryza sativa	–	768 ml
10. Satavari	Asparagus racemosus	–	144 gm

Special method of preparation

Heat the juice of ingredients 2-8 (mix in equal quantity) and kalka of 10 along with coconut oil. Add Tandulambu to it on boiling and continue heating till Taila paka.

Dose– As per need, for external application

Important therapeutic uses

Ulcer, Arthritis, Inflammation due to trauma, Bone fracture, Dislocation of bones.

Probable mode of action of Abhyanga by Murivenna Taila

Coconut oil is used as based for preparation of Murivenna Taila, it provides better permeability into stratum corneum. Due to its synergistic action in relieving the symptoms of soft tissue injuries.

Vrana- Jatyadi Taila

जातीनिम्बपटोलानां नक्तमालस्य पल्लवाः ॥
सिक्थं समधुकं कुष्ठं द्वे निशे कटुरोहिणी।
मञ्जिष्ठा पद्मकं लोध्रमभया नीलमुत्पलम् ॥
तुत्थकं सारिवा बीजं नक्तमालस्य दापयेत्।
एतानि समभागानि पिष्ट्वा तैलं विपाचयेत् ॥
नाडीव्रणे समुत्पन्ने स्फोटके कच्छुरोगिषु।
सद्यः शस्त्रप्रहारेषु दग्धविद्धेषु चैव हि ॥
नखदन्तक्षते देहे व्रणे दुष्टे प्रशस्यते ॥

(शार्ङ्गधरसंहिता, मध्यमखण्ड, अध्याय 9;168-171 1/2)

1. Jati – 10.66 gm
2. Nimba – 10.66 gm
3. Patola – 10.66 gm
4. Naktamala (Karanja) – 10.66 gm
5. Siktha (Madhucchista) – 10.66 gm
6. Mahuka (Yasti) – 10.66 gm
7. Kustha – 10.66 gm
8. Haridra – 10.66 gm
9. Daruharidra – 10.66 gm
10. Katurohini (Katuka) – 10.66 gm
11. Manjistha – 10.66 gm
12. Padmaka – 10.66 gm
13. Lodhra – 10.66 gm
14. Abhaya (Haritaki) – 10.66 gm
15. Nilotpala (Utpala) – 10.66 gm
16. Tutthaka (Tuttha) – 10.66 gm
17. Sariva (Sveta Sariva) – 10.66 gm
18. Naktamala (Karanja) – 10.66 gm
19. Taila (Tila) – 768 gm
20. Water – 3.0721 L

Usage– Used externally for Abhyanga

Important therapeutic uses

Kacchu (Itching), Sphotaka (Boil) Nadi vrana (Fistula) Sastraprahara vrana (Wounds due to sharp weaopons), Dagdha vrana (Burn ulcer), Danta-Nakha Ksata (Injury caused by teeth and nails), Dusta vrana (Non-healing ulcer).

Probable mode of action of Jatyadi Taila on Vrana

The majority of Jatyadi Taila's constituents contain Tikta, Kashaya Rasas, and Laghu, Ruksha Gunas. Jatyadi Taila is Tikta and Kashaya Rasa Pradhana, both of which are Pitta Kapha hara and have the properties of Vrana Shodhana, Ropana, Pootihara, and Vedanasthapana. Jaati contains salicylic acid, which has antibacterial, anti-inflammatory, and antifungal properties.

Smashru- Shankha Bhasma

शुद्धशङ्खस्य खण्डानि शरावे स्थापयेत्सुधीः।
शरावेण पिधायाथ यत्नात्सन्धि प्रलेपयेत्।
आतपे त्वथ संशोष्य पुटेद् गजपुटे भिषक्।
स्वतः शीतं समुद्धृत्य खल्वे सञ्चूर्णयेद् भिषक् ॥
चूर्णितञ्चाथ विज्ञाय सम्पुटस्थं ततः पुटेत्।
एवं पुटद्वयेनैव शङ्खको मृतिमाप्नुयात् ॥

(R.T, 12/17-19)

Dose- 250-300mg

Anupana- Nimbu Swarsa, Triphala Kwatha.

Probable mode of action of Shankha Bhasma on Smashru– Due to it Kshara Guna it may act.

Kesh Ghanta- Bhringraja Taila

अनूपदेशसम्भूतं गृहीत्वा मार्कवं शुभम्।
सुधौतं जर्जरीकृत्य स्वरसं तस्य चाहरेत् ॥
चतुर्गुणेन तेनैव तैलप्रस्थं विपाचयेत्।
क्षीरपिष्टैरिमैर्द्रव्यैः संयोज्य मतिमान् भिषक् ॥
मञ्जिष्ठा पद्मकं लोध्रं चन्दनं गैरिकं बला।
रजन्यौ केशरञ्चैव प्रियङ्गु मधुयष्टिका ॥
प्रपौण्डरीकं गोपी वा पलिकान्यत्र दापयेत्।
सम्यक् पक्वं ततो नीत्वा शुभे भाण्डे निधापयेत् ॥
केशपाते शिरोदुष्टे मन्यास्तम्भे गलग्रहे।
शिरःकर्णाक्षिरोगेषु नस्येऽभ्यङ्गे च योजयेत् ॥
कुञ्चिताग्रानतिस्निग्धान् कचान् कुर्याद् बहूंस्तथा।
खालित्यमिन्द्रलुप्तञ्च तैलमेतद् व्यपोहति ॥

(भैषज्यरत्नावली, क्षुद्ररोगाधिकार; 91-96)

1. Taila (Tila) – 768 ml.
2. Markava (Bhrngaraja) – 3.072 L
3. Manjistha – 48 gm
4. Padmaka – 48 gm
5. Lodhra – 48 gm
6. Candana (Raktacandana) – 48 gm
7. Gairika – 48 gm
8. Bala – 48 gm
9. Haridra – 48 gm
10. Daruharidra – 48 gm
11. Kesara (Nagakesara) – 48 gm
12. Priyangu – 48 gm
13. Madhuyasti (Yasti) – 48 gm
14. Prapaundarika – 48 gm
15. Gopi (Sveta sariva) – 48 gm

Dose– Used externally for Nasya, Sirobhyanga and Kavalagraha.

Important therapeutic used

Kesapata (Falling of hair), Netraroga (Eye disorder), Karana roga (Disease of ear), Siroroga (Disease of head), Manya stambha (Neck rigidity/ Torticollis), Galagraha (Difficulty in swallowing), Khalitya (Alopecia), Indralupta (Alopecia).

Probable mode of action of Bhringraja Taila on Kesh Ghanta

Bhringraj oil helps to nourish the scalp and hair, promoting healthy growth and preventing hair loss. It may improve blood circulation to the scalp, which can help to increase the oxygen and nutrient supply to the hair follicles, leading to stronger, healthier hair.

Akala Palita- Hasthi Danta Mashi

हस्तिदन्तमसीं कृत्वा मुख्यं चैव रसाञ्जनम्।
रोमाण्येतेन जायन्ते लेपात्पाणितलेष्वपि ॥
(Su.chi. 1/101)

Hastidanta, Masi along with Rasanjan is used as Romjanan.

Probable mode of action of Hasthi Danta Mashi on Akala Palita– Akala Palita is Pittaja Roga. Hasti Danta Masi may reaching into hair root pacify Pitta and protects hair from Akala Palita.

Indralupta- Icchabhedi Rasa

शुण्ठीमरिचसंयुक्तं रसगन्धकटङ्कणम्।
जैपालास्त्रिगुणाः प्रोक्ताः सर्वमेकत्र पेषयेत् ॥
इच्छाभेदीद्विगुञ्जः स्यात्सितया सह पाययेत्।
यावन्तश्चल्लुकाः पीतास्तावद्वेगाद् विरेचयेत् ॥
तक्रौदनञ्च दातव्यमिच्छाभेदी यथेच्छया ॥
(Bha. Ra. 40/84-85)

Probable mode of action of Icchabhedi Rasa on Indralupta

A classical ayurvedic preparation which contains Jayapala, is Icchabhedi Rasa. Phorbol esters present in Jayapala have skin irritant effect and it may regulates cell growth and cell differentiation. Due to Virechana effect it remove vitiated Pitta which is responsible for Indralupta.

Lomashatana- Lomashatana Yoga

शङ्खचूर्णस्य भागौ द्वौ हरितालं च भागिकम्।
शुक्तेन सह पिष्टानि लोमशातनमुत्तमम् ॥

Shankha churn two part along with Hartala one part when it is applied with shukta acts as Lomashatana.

Probable mode of action of Lomashatana lepa on Loma

The common ingredient found in all most all lomashatana yoga is Haratala, Shankha Bhasma, Kadali Kshara, Go mutra. These are Ushna in properly and destroy hair root causing Lomashatana.

6. Guda (Rectal route)

Advantage- Causes quick absorption of the drugs due to the high vascularity, can be given easily in unconscious patients.

Disadvantage- Causes irritation and pain in the rectum, not comfortable to the patient, difficult to administer in non-cooperative patients.

Probable mode of action of Rectal route drug Administration

Lower portion of rectum affords a large absorption surface area from which soluble substances can pass quickly and reach the venous circulation directly and rapid action of drug is produced. Enema is aqueous or oily solution acts both locally and systemically. Rectum is rich in blood and lymph supply. So, drugs administered through it may get absorbed from upper part of rectal mucosa. From there it enters the portal vein and thus enters systemic circulation and acts for the action like purgative, sedative, anthelmintic, anti-inflammatory or nutritive effects. Suppositories may produce its action by irritating the mucous membrane of rectum.

Dosage forms which are used by Rectal Route– Vartis, Taila, Ghrita, Kalka, Churna, Kashaya.

7. Mutra Marga (Urethral Route)

Advantages- Commonly used in males, quick action as directly it acts on site of disease.

Disadvantages- If any obstruction in the passage cannot be given, causes irritation to the sensitive urethral passage, cooperation of the patient is necessary, causes discomfort to the patient.

Probable mode of action of Urethral Route drug Administration

In male's urethra acts as passage for both urine and semen. Because of the rich blood supply, the rate of absorption of the drug administered is quick.

Dosage form which are used by Urethral Route- Taila, Ghrita, Varti etc.

Procedures Which are follow through Urethral Route- Uttara Basti

8. Yoni Marga (Vaginal route)

Advantages- Easy to administer, quick onset of action, minimal systemic side effects, an increase in bioavailability, first pass metabolism can be avoided.

Disadvantages- Gender specificity, variability in drug absorption related with menstrual cycle, menopause and pregnancy, personal hygiene, causes irritation to the mucosa, causes discomfort.

Probable mode of action of Vaginal Route drug Administration

The vaginal rugae and micro ridges on the epithelial cells surface permit the vagina to expand, allowing the placement of vaginal formulations and increase the surface area of the vagina enhancing the drug absorption. The vagina has remarkable features in terms of vaginal secretions, pH, enzyme activity and micro-flora. These factors effect formulation spreading and retention as well as absorption and drug release in vagina.

Dosage form which are used by Vaginal Route- Taila, Ghrita, Varti etc.

Procedures Which are follow through Vaginal Route- Yoni Dharana, Yoni Pichu, Yoni Dhavana, Yoni Dhoopana. In Yoni Dharana, Pichu and Dhavana, drug remains, into direct contact while Dhoopana may acts on the outer portion of Vagina.

10 CHAPT. Rational prescription along with safe dispensing of Ayurvedic formulations

Syllabus

Rational prescription along with safe dispensing of Ayurvedic formulations as per NABH guideline

Learning objectives

1. Describe and write demo ideal prescription.
2. Explain the safe dispensing and efficacious use of Ayurvedic drugs
3. Explain the importance of rational prescribing of drugs and the concept of essential drugs.
4. Describe the standard protocol for safe dispensing of Ayurvedic drugs.
5. Demonstrate and educate home remedies to small group of population.
6. Explain ethical aspects related to prescription writing

Total - 5 hours (Lecture :01 hour, Non-lecture: 04 hours)
Marks- 5 marks, MCQ- Yes, SAQ (5 Marks)- Yes and LAQ (10 Marks)- No

Rational prescription

Rational prescription in Ayurveda refers to the judicious, evidence-based, and patient-specific use of Ayurvedic formulations and treatments. It ensures that the prescribed medicines are appropriate for the patient's health condition, constitution, and circumstances, while also considering efficacy, safety, and ethical guidelines.

1. Comprehensive Patient Evaluation

- **Prakriti (Constitution)**: Understand the patient's individual constitution (Vata, Pitta, Kapha).
- **Vikriti (Imbalance)**: Assess the doshas (bioenergies) that are imbalanced and causing disease.
- **Agni (Digestive Fire)**: Consider the strength of the patient's digestive capacity and metabolism.
- **Ama (Toxins)**: Identify if there is accumulation of toxins or undigested food in the system.
- **Ojas and Srotas (Vitality and Channels)**: Assess the patient's vitality and the integrity of their bodily channels.

2. Evidence-Based Selection of Formulations

- Choose formulations based on scientific evidence, classical Ayurvedic texts, and clinical experience.
- Ensure the selected herbs, minerals, or compounds have proven therapeutic actions for the diagnosed condition.
- Avoid using formulations with insufficient safety or efficacy data, especially for serious or chronic conditions.

3. Individualized Treatment

- Customize treatment based on the unique needs of the patient:
  - Consider their age, gender, habitat, diet, and lifestyle.
  - Prescribe medicines that suit their constitution (prakriti) and address specific

imbalances (vikriti).

- For example, a Vata-dominant person might benefit more from warming, nourishing herbs, while a Pitta-dominant person may need cooling, anti-inflammatory treatments.

4. Dosage and Duration

- Prescribe an appropriate dosage tailored to the patient's body type, strength, and age.
- Adjust dosages for special populations (children, elderly, pregnant women, etc.).
- Clearly communicate the duration of treatment to the patient and ensure follow-up to track progress.

5. Minimizing Risks and Interactions

- Consider potential drug-herb interactions, particularly if the patient is also using allopathic medications.
- Be aware of any possible side effects or contraindications, especially for long-term use or formulations containing metals/minerals (rasa shastra).
- Avoid polypharmacy (overuse of multiple herbs or formulations) to reduce the risk of adverse effects.

6. Monitoring and Feedback

- Regularly monitor the patient's response to treatment. This could involve:
  - Checking for signs of improvement in the disease.
  - Assessing whether the formulation is well-tolerated or needs adjustment.
- Modify the prescription based on changes in the patient's condition.

7. Ethical Considerations

- Only prescribe what is necessary and avoid over-prescription.
- Ensure that the formulations prescribed are ethically sourced and of high quality.
- Patient consent and education: Inform patients about the formulation, its effects, potential side effects, and the expected course of treatment.

Example of Rational Prescription in Ayurveda

For a patient suffering from rheumatoid arthritis with Vata and Kapha imbalance, a rational prescription might include:

- **Herbs**: Dashmool, Shallaki (Boswellia serrata), Guggulu for anti-inflammatory action.
- **Dietary Advice**: A diet balancing Vata and Kapha doshas, such as warming, light, and easily digestible foods.
- **Dosage**: Adjusted based on patient's digestion and strength.
- **Panchakarma**: If needed, recommend detoxification therapies like Virechana (purgation) to balance Pitta and clear toxins.

Rational prescription ensures that Ayurvedic treatment is safe, effective, and tailored to the individual, while promoting long-term health and preventing complications.

Safe dispensing

Safe dispensing of Ayurvedic formulations is an essential process that ensures the right medicines are provided to patients in a way that maximizes therapeutic outcomes and minimizes risks. It involves careful handling, storage, preparation, and communication to ensure safety, quality, and patient compliance.

Here's how to ensure safe dispensing of Ayurvedic formulations:

1. Selection of Authentic, Quality Formulations

- **Source verification**: Ensure that the formulations are sourced from reputable manufacturers who follow Good Manufacturing Practices (GMP) to maintain quality standards.
- **Quality control**: Check for any certification marks like AYUSH premium mark or third-party testing reports to ensure that the product

is free from contaminants like heavy metals, pesticides, or harmful microbes.
- **Standardization**: Ensure that formulations are standardized for potency, ensuring uniformity in dosage and effectiveness.

2. Correct Storage and Handling

- **Storage conditions**: Follow proper storage guidelines to maintain the integrity of formulations. For instance:
  - Herbal formulations should be stored in cool, dry places, away from direct sunlight.
  - Certain formulations like tailas (medicated oils) or asavas/arishtas (fermented preparations) may require airtight containers to prevent contamination.
  - Keep metals and mineral-based formulations in moisture-free conditions.
- **Expiry dates**: Pay attention to the expiry dates of products. Ayurvedic formulations, though long-lasting, should not be used beyond their recommended shelf life.
- **Proper labelling**: Ensure that all formulations are clearly labeled with necessary details like batch number, expiry date, ingredients, and usage instructions.

3. Clear and Accurate Dispensing Instructions

- **Correct dosage**: Dispense the exact dose as prescribed by the physician. Measure powders, liquids, or pills accurately to avoid under- or overdosing.
- **Instructions for use**:
  - Provide clear, understandable instructions on how and when to take the medicine (e.g., before or after meals, with milk, water, etc.).
  - Advise on any dietary restrictions or lifestyle changes that should accompany the treatment, such as avoiding cold foods while taking warming herbs.
- **Precautions and contraindications**: Inform the patient about any specific precautions, such as avoiding certain foods or medications that may interact negatively with the Ayurvedic formulation.

4. Patient Education and Counselling

- **Explain the formulation**: Ensure that the patient understands what they are taking, why it's been prescribed, and how it will benefit them.
- **Potential side effects**: Inform the patient of any possible side effects or interactions (e.g., between Ayurvedic formulations and allopathic drugs). Emphasize the importance of reporting any adverse effects immediately.
- **Proper use and adherence**: Emphasize the importance of adhering to the prescribed regimen. For example, herbal powders may need to be mixed with honey or ghee, and fermented products like asavas may require dilution with water.
- **Storage advice**: Teach the patient how to store the medication properly at home to maintain its effectiveness (e.g., keeping oils away from heat or storing churnas in airtight containers).

5. Safe Handling of Special Ayurvedic Formulations

- **Bhasmas and Rasa Shastra formulations**: Special attention is needed when handling Ayurvedic formulations containing metals or minerals (e.g., bhasmas). These should be dispensed only if prepared and processed through the appropriate detoxification procedures (shodhana) according to classical texts.
- **Fermented preparations (Asavas and Arishtas)**: Care should be taken with fermented liquids as they may contain alcohol. They should be dispensed in appropriate doses and kept away from children.
- **Medicated oils and ghees**: These need to be handled properly to prevent leakage or spillage during dispensing. Ensure the containers are well-sealed and appropriate instructions for topical use are given if necessary.

6. Documentation and Record-Keeping

- Maintain a record of all dispensed formulations, especially when dealing with formulations that contain metals or are part of a detoxification regimen.
- Monitor adverse reactions: Keep a system in place for tracking any adverse effects reported by patients and for evaluating the outcomes of the prescribed formulations.

7. Ensuring Legal Compliance

- Adhere to the regulations set by local and national authorities (such as AYUSH in India), which provide guidelines on the dispensing of Ayurvedic medicines.
- **Licensed personnel**: Ensure that only trained and licensed professionals are involved in the dispensing process. They should be well-versed in Ayurvedic pharmacology and therapeutic principles.

Example of Safe Dispensing

For a patient with chronic digestive issues, the prescription might include Triphala Churna. Safe dispensing would involve:

- Providing the Churna in a sealed, moisture-free packet.
- Instructing the patient to take 1-2 grams of Triphala Churna with warm water before bedtime.
- Explaining that it helps in digestion and bowel regulation, but cautioning the patient about excessive use, which could lead to dehydration or weakness.
- Advising proper storage in an airtight container to maintain freshness.

By following these principles, Ayurvedic formulations can be dispensed in a manner that maximizes their therapeutic benefits and minimizes potential risks, leading to safer and more effective patient outcomes.

Summary of Standards

MOM. 1. Documented policies and procedures guide the organization of pharmacy services and usage of medication.

MOM. 2. There is a hospital formulary.

MOM. 3. Documented policies and procedures exist for storage of medication.

MOM. 4. Documented policies and procedures exist for prescription of medications.

MOM. 5. Documented policies and procedures guide the safe dispensing of medications.

MOM. 6. There are defined procedures for medication management.

MOM. 7. Patients are monitored after medication administration.

MOM. 8. Near misses, medication errors and adverse drug events are reported and analysed.

MOM. 9. Documented policies and procedures guide the use of medical supplies and consumables.

MOM. 10. Documented policies and procedures guide the use of formulations containing toxic/narcotic drugs.

Standards and Objective Elements

Standard

MOM.1. Documented policies and procedures guide the organization of pharmacy services and usage of medication.

Objective Elements

a. There is a documented policy and procedure for pharmacy services and medication usage.

b. These comply with the applicable laws and regulations.

c. A multidisciplinary committee guides the formation and implementation of these policies and procedures.

d. There is a procedures to obtain medication when the pharmacy is closed.

Standard

MOM.2. There exists a hospital formulary

Objective Elements

a. A list of medication appropriate for the patients and organization's resources is developed.
b. The list is developed collaboratively by the multidisciplinary committee.
c. The formulary is available for clinicians to refer and adhere to.
d. There is a defined process for acquisition of these medications.
e. There is a defined process for preparation of these medications.
f. There is a process to obtain medications not listed in the formulary.

Standard

MOM. 3. Documented policies and procedures exist for storage of medication

Objective Elements

a. Documented policies and procedures exist for storage of medications.
b. Medications are stored in a clean, safe and secure environment; and incorporating manufacturer's recommendations (s).
c. Sound inventory control practices guide storage of the medications.
d. Sound alike and look alike medications are identified and stored separately.

Standard

MOM. 4. Documented policies and procedures exist for storage of medication

Objective Elements

a. Documented policies and procedures exist for prescription of medications.
b. The organisation determines the minimum requirements of a prescription.
c. The organization determines who can write orders.
d. Orders are written in a uniform location in the medical records.
e. Medication orders are clear, legible, dated, timed, named and signed.
f. Medication orders are clear, legible, dated, timed, named and signed.
g. Policy on verbal orders is documented and implemented.
h. The organization defines a list of high alert medication.
i. High alert medication orders are verified prior to dispensing.

Standard

MOM. 5. Documented policies and procedures guide the safe dispensing of medications

Objective Elements

a. Documented policies and procedures guide the safe dispensing of medications.
b. The policies include a procedure for medication recall.
c. Expiry dates are checked prior to dispensing, wherever applicable.
d. Labeling requirements are documented and implemented by the organization.

Standard

MOM. 6. There are documented policies and procedures for medication management

Objective Elements

a. Medications are administered by those who are permitted to do so.
b. Prepared medication is labeled prior to preparation of a second drug.
c. Patient is identified prior to administration.
d. Medication is verified from the order prior to administration.

e. Dosage is verified from the order prior to administration.
f. Route is verified from the order prior to administration.
g. Timing is verified from the order prior to administration.
h. Medication administration is documented.
i. Polices and procedures govern patient's self administration of medications.
j. Documented policies and procedures govern patient's medications brought from outside the organization.

Standard

MOM. 7. Patients are monitored after medication administration

Objective Elements

a. Documented policies and procedures guide the monitoring of patients after medication administration.
b. The organisation defines those situations where close monitoring is required.
c. Monitoring is done in a collaborative manner.
d. Medications are changed where appropriate based on the monitoring.

Standard

MOM. 8. Near misses, medication errors and adverse drug events are reported and analysed

Objective Elements

a. Documented procedure exists to capture near miss, medication error and adverse drug event.
b. Near miss, medication error and adverse drug event are defined.
c. These are reported within a specified time frame.
d. They are collected and analysed.
e. Corrective and/or preventive action (s) are taken based on the analysis where appropriate.

Standard

MOM. 9. Documented policies and procedures guide the use of medical supplies and consumables

Objective Elements

a. There is a defined process for acquisition of medical supplies and consumables.
b. Medical supplies and consumables are used in a safe manner, where appropriate.
c. Medical supplies and consumables are stored in a clean, safe and secure environment and incorporating manufacture's recommendations (s).
d. Sound inventory control practices guide storage of medical supplies and consumables.

Standard

MOM. 10. Documented policies and procedures guide the use of formulations containing toxic/narcotic drugs

Objective Elements

a. Documented procedures guide the use of formulations containing toxic/narcotic drugs.
b. These procedures are in consonance with local and national regulations.
c. These drugs are stored in a secure manner.
d. A proper record is kept of the usage, administration and disposal of these drugs.
e. These drugs are handled by appropriate personnel in accordance with the documented procedures.

11 CHAPT. Traditional and Local health Practices

Syllabus

Introduction to Traditional & Local health Practices and Government initiatives to preserve it. Brief introduction to TKDL.

Learning objectives

1. Identify Local Health Traditions and Healing Knowledge
2. Recognise the possible potential of product development and research based on Traditional knowledge
3. Identify the factors responsible for grant of patent and erroneous grant of patent on indian traditional knowledge.
4. Appraise traditional knowlege of Ayurvedic medicines

Total - 6 hours (Lecture :02 hour, Non-lecture: 04 hours)
Marks- 5 marks, MCQ- Yes, SAQ (5 Marks)- Yes and LAQ (10 Marks)- No

Introduction to Traditional and Local Health Practices

Traditional Health Practices has been in existence even before the advent of modern system of medicine. It is still widely accepted and used in prevention and treatment of diseases. Majority of global population is dependent on traditional and local health. This type of knowledge is transmitted orally from one generation to next generation as traditional and local health tradition and largely remain undocumented. In India, AYUSH is codified and officially recognised system of traditional medicine which is practised though all over India and major of the population get benefitted from it. Now it is more publically accepted specially after corone period. Local health practices refers to range of therapies and healing tradition that include home remedies, practices of herbalists, faith and sprirtual healing etc. It may be specific to a particular geographical area, particular community etc.

For example ''JEEVANI'' is an herbal medicine developed by the scientists of TBGRI (Tropical Botanic Garden and Research Institute). It is based on the traditional practices of Kani Tribe found in Thiruvananthpuram district of Kerala. It is derived from Arogyapacche plant (Trichopus Zeylaricus). It activates body's natural defenses, cellular immune system etc. likewise in North East India Malaria and Jaundice are widely treated by traditional healers. Tribal community in Arunachal Pradesh also use locally available herbs for treatment of ailments. Mishing community of North East India use a variety of herbs for the treatment of different diseases.

Reference- Shankan R, Lavekar, GS, Deb S, Sharma. BK Traditional healing practice and folk medicines used by mishing community of North. East India. J Ayurveda Integr Med. 2012;3:124-9.

Working paper No. 66 protection of Traditional Medicine. Richard Wilder Dec. 2000. ICRIER. New Delhi.

Mishra A. Nambiar D, Madhavan H. The Making of 'Local Health Traditions' In India Revitalisation or Marginalisation? Economic & Political weekly July 28, 2018 Vol L III No. 30.

Protection of Traditional Knowledge– Initatives of India Dr. Ghazala Javed RO(V)/Scientist-IV ministry of AYUSH. Govt of India.

Government Initiative to Protect Traditional Health Practices

1. Establishment of Traditional Knowledge Digital Library (TKDL)
2. WHO Global Centre for Traditional Medicine (GCTM)
3. Biological Diversity Act
4. Forest Rights Act 2006
5. Exclusive Ministry (i.e. Ministry of AYUSH)
6. The Geographical Indication of Goods (Registration and Protection) Act 1999.

Defensive- Set of strategies to ensure that third parties do not gain illegitimate or unfounded IP rights over.

Positive protection

- Acknowledging control of custodians (State/ community) over traditional knowledge.
- Ability to deny/authorize access and use
- Prevention of Misappropriation– Prior Informed Consent, Including the conditions of use
- Benefit Sharing-Mutually Agreed Terms (Monetary as well as non-monetary)

Legislative

- National Biological Diversity Act
- Patents Act
- Protection of Plant Varieties and Farmers Rights Act
- Geographical Indications Act
- Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.

Administrative

- TKDL (Traditional Knowledge Digital Liberary)
- TKRC (Traditional Knowledge Resource Centre)
- Inclusion of Indian Journals relating to TK in PCT minimum documentation (2 journals)
- State level - TKIK
- Community level databases-PBRs

Traditional Knowledge Digital Library (TKDL)

The Traditional Knowledge Digital Library (TKDL) is one of India's most significant efforts to protect and preserve its rich heritage of traditional knowledge, particularly in the fields of Ayurveda, Unani, Siddha, and Yoga. This knowledge, developed over millennia, has often been shared orally or recorded in ancient texts in languages like Sanskrit, Arabic, Tamil, and Persian. In recent decades, however, India has faced challenges in protecting this knowledge from being misappropriated or exploited by foreign entities through biopiracy—the process of obtaining patents or intellectual property rights on traditional knowledge and biological resources without permission or benefit-sharing agreements.

The TKDL, a collaboration between the Council of Scientific and Industrial Research (CSIR) and the Ministry of AYUSH, serves as a critical solution to these challenges by preventing unethical patent claims, safeguarding the intellectual property rights of India's traditional knowledge systems, and promoting ethical research and innovation.

Background and Genesis of the TKDL

In the 1990s, India witnessed several high-profile cases of biopiracy where international entities were granted patents on traditional Indian knowledge that had been in use for centuries. The most famous cases included the turmeric patent granted in the United States for its wound-healing properties and the patent on neem for its fungicidal properties. Both cases were challenged by India and eventually revoked, but the legal battles were lengthy and costly. This spurred the Indian government to create a systematic solution to prevent such cases in the future.

The fundamental problem was that traditional knowledge, despite being well documented in ancient texts, was often not in a form that modern patent systems could recognize or reference as prior

art—existing knowledge that can invalidate a patent claim. Most patent offices operate using modern languages and databases that follow specific legal and scientific formats. Traditional knowledge, however, was often locked in ancient languages or scattered across various texts. Without a reliable system to provide evidence of prior art, foreign companies could exploit this gap by claiming patents on widely known traditional formulations or practices.

To address this issue, the Government of India initiated the TKDL project in 2001. The goal was to digitize India's traditional knowledge and present it in a format that would be easily accessible to global patent examiners, thus preventing wrongful patents on India's traditional medicinal systems.

Objectives of the TKDL

The TKDL was developed with a clear set of objectives, designed to not only prevent biopiracy but also promote the ethical use of traditional knowledge globally. These objectives include:

1. **Protection of Traditional Knowledge:** The primary aim of TKDL is to protect India's traditional knowledge systems from being wrongfully patented or misappropriated by external entities. By creating a digital database of traditional knowledge, India can provide documented proof of prior art to patent examiners, helping them reject any illegitimate claims.
2. **Creating a Bridge Between Traditional Knowledge and Modern Intellectual Property Systems:** TKDL was designed to bridge the gap between traditional knowledge, often written in ancient languages, and modern intellectual property (IP) systems that operate in English, German, French, Japanese, and other global languages. TKDL converts knowledge from traditional texts into patent-compatible formats.
3. **Promoting Ethical Research and Innovation:** By digitizing and protecting traditional knowledge, the TKDL encourages the ethical use of this knowledge for research and innovation, ensuring that traditional knowledge is used in a way that benefits both the knowledge holders and the global community.
4. **Preventing the Misuse of Biological Resources:** In addition to preventing the misappropriation of traditional knowledge, TKDL also helps protect India's biological resources from being patented or exploited without consent or benefit-sharing agreements.

Structure and Content of the TKDL

The TKDL is a comprehensive database that covers information from four major traditional systems of medicine in India—Ayurveda, Unani, Siddha, and Yoga. Over 290,000 formulations have been documented from traditional texts, including well-known ancient works such as:

Charaka Samhita

Sushruta Samhita

Ashtanga Hridaya

Bhavaprakasha

The Unani texts of Ibn Sina (Avicenna)

The knowledge documented in these texts includes a wide range of medicinal practices, including the use of herbs, minerals, dietary regimens, and therapeutic practices that have been in use for centuries.

One of the most critical aspects of TKDL is that it translates this knowledge into five major languages—English, French, German, Japanese, and Spanish—making it accessible to international patent examiners. This translation is done using a complex classification system known as the Traditional Knowledge Resource Classification (TKRC), which organizes information in a way that aligns with the format of modern patent systems.

The TKDL also includes information about the dosages, preparation methods, and clinical applications of traditional formulations. This level of detail helps establish the prior art necessary to prevent illegitimate patent claims.

Patent-Compatible Format

One of the most significant innovations of TKDL is the development of a patent-compatible format. Traditional knowledge, particularly when written in ancient languages, is often difficult for modern patent examiners to interpret. Furthermore, traditional knowledge is often presented in a holistic or descriptive manner, which contrasts with the precise, formulaic language used in patent systems. To overcome these challenges, the TKDL team worked to standardize the information and present it in a format that patent offices could use directly during their prior art searches.

The Traditional Knowledge Resource Classification (TKRC) system was developed as part of this process. It is a structured classification system that organizes traditional knowledge into easily searchable categories, based on the format used by international patent offices. This classification system aligns closely with the International Patent Classification (IPC) system, making it easier for patent examiners to search for and reference traditional knowledge in the TKDL.

Biopiracy Prevention and the Role of TKDL

One of the core purposes of TKDL is to prevent biopiracy—the exploitation of traditional knowledge and biological resources by foreign companies or individuals without proper authorization or benefit-sharing agreements. Biopiracy has been a significant issue in India, where traditional knowledge has been passed down for thousands of years, but was not always documented in ways that could be recognized by modern legal systems.

High-Profile Cases of Biopiracy

Turmeric Case: In 1995, two researchers from the US were granted a patent for the use of turmeric in wound healing. However, this was a well-documented use of turmeric in Indian traditional medicine, particularly in Ayurveda. The Indian government challenged the patent by providing evidence from ancient texts, and the patent was eventually revoked. This case highlighted the importance of documenting traditional knowledge in a way that could be recognized by modern patent systems.

Neem Case: Similarly, in 1994, a European patent was granted for the fungicidal properties of neem, a plant that has been used in India for its medicinal properties for centuries. The patent was also eventually revoked after a legal battle, but it underscored the need for a systematic way to protect traditional knowledge.

By digitizing and cataloging traditional knowledge in a format that patent examiners can use, TKDL helps prevent similar cases of biopiracy from occurring. The database provides evidence of prior art, which is critical in patent law. Prior art refers to existing knowledge that predates a patent application. If prior art can be established, a patent claim can be rejected.

As of 2023, TKDL has been instrumental in preventing more than 200 patent applications based on traditional knowledge, either by having the patents rejected, withdrawn, or significantly amended. These include patents on herbal formulations, therapeutic practices, and biological resources that have been part of India's traditional knowledge for centuries.

Access and Collaboration with Patent Offices

TKDL has entered into access agreements with several major international patent offices, allowing them to use the database for prior art searches. Some of the key patent offices with access to TKDL include:

- European Patent Office (EPO)
- United States Patent and Trademark Office (USPTO)
- United Kingdom Patent Office
- Canadian Intellectual Property Office
- Australian Patent Office

These agreements ensure that patent examiners in these countries can use TKDL to check for prior art related to Ayurveda, Unani, Siddha, and Yoga formulations, thus preventing unethical patents. In most cases, the access to TKDL is restricted to

patent examiners to prevent commercial exploitation of the information.

Global Impact of TKDL

The TKDL has had a profound impact on the global intellectual property landscape. Not only has it prevented biopiracy and protected India's traditional knowledge, but it has also raised global awareness about the importance of safeguarding traditional knowledge systems.

Promoting Ethical Innovation: By providing a comprehensive database of traditional formulations, the TKDL encourages ethical innovation in the fields of medicine, biotechnology, and pharmaceuticals. Researchers and companies can use TKDL as a resource for exploring new applications of traditional knowledge, provided they do so in a way that respects the rights of the knowledge holders and adheres to benefit-sharing agreements.

Protecting Biodiversity: The TKDL also plays a role in protecting India's biodiversity by preventing the wrongful exploitation of biological resources. Many traditional formulations involve the use of indigenous plants and herbs, and by documenting these formulations, TKDL helps prevent bioprospecting activities that could deplete these resources without proper regulation.

Global Model for Traditional Knowledge Protection: The TKDL has become a model for other countries looking to protect their own traditional knowledge systems. Countries in Africa, Latin America, and Asia have expressed interest in developing similar systems to safeguard their traditional medicinal knowledge and biological resources.

Challenges and the Future of TKDL

While the TKDL has been largely successful in achieving its objectives, it also faces several challenges. One of the key challenges is the accessibility of the database. While the TKDL is accessible to patent offices, it is not publicly available due to concerns about the commercial exploitation of traditional knowledge. However, this also limits the ability of researchers and traditional medicine practitioners to access the database for legitimate purposes.

Another challenge is the continuous updating of the database. Traditional knowledge is not static, and new formulations and practices are constantly being developed. The TKDL must continuously update its database to reflect these changes and ensure that it remains a comprehensive and up-to-date resource.

In the future, the TKDL aims to expand its collaboration with more international patent offices and improve its accessibility for researchers, while still maintaining strict safeguards to prevent biopiracy.

The Traditional Knowledge Digital Library (TKDL) is a groundbreaking initiative that has successfully safeguarded India's traditional knowledge systems from biopiracy and wrongful patents. By digitizing ancient knowledge and making it accessible to patent examiners around the world, TKDL has established a critical defense mechanism for India's intellectual property. Furthermore, it promotes the ethical use of traditional knowledge in modern research and innovation, ensuring that these ancient practices continue to benefit humanity while respecting the rights of the original knowledge holders. As a model for the protection of traditional knowledge, TKDL has set a global precedent, and its ongoing development will continue to shape the future of intellectual property in the context of traditional medicine and biodiversity.

12 CHAPT.

Pharmacovigilance for Ayurveda drugs

Syllabus

Pharmacovigilance and Adverse Drug Reactions (ADR) Pharmacovigilance Programme of Ayurveda, Siddha, Unani and Homeopathy (ASU & H) Drugs, Central Sector Scheme and Centres of Pharmacovigilance of ASU & H Drugs

Learning objectives

1. Describe the term Pharmacovigilance and explain importance of Pharmacovigilance for Ayurvedic drugs.
2. Explain the status and central sector scheme of Pharmacovigilance for Ayurveda, Siddha, Unani, and Homeopathy (ASU & H) drugs.
3. Define Adverse Drug Reactions (ADR) and its types.
4. Identify and monitor ADRs.
5. Discuss and make critical comments on the safe and efficacious use of Ayurvedic drugs.
6. Debate on ADR of ASU drugs

Total - 5 hours (Lecture :01 hour, Non-lecture: 04 hours)

Marks- 5 marks, MCQ- Yes, SAQ (5 Marks)- Yes and LAQ (10 Marks)- No

Pharmacovigilance is a scientific discipline that revolves around the safety of pharmaceutical products. It involves the detection, assessment, understanding, and prevention of adverse drug reactions (ADRs) or any other drug-related problems. As drugs are introduced into the market and used by the population, their safety profile continues to evolve through the monitoring of real-world usage. This ongoing process of tracking the effects of drugs is crucial because the controlled environments of clinical trials may not reveal all potential side effects, especially rare or long-term issues. Pharmacovigilance, therefore, plays a pivotal role in ensuring that drugs remain safe and effective over time.

The World Health Organization (WHO) defines Pharmacovigilance as the "science and activities relating to the detection, assessment, understanding, and prevention of adverse effects or any other drug-related problem." Pharmacovigilance is part of the broader public health endeavor, designed to protect patients by identifying risks associated with pharmaceuticals and ensuring that the benefits of drug therapy outweigh these risks.

Pharmacovigilance systems rely on various activities, such as spontaneous reporting of adverse drug reactions, active surveillance of drug use, and monitoring drug-related problems through electronic health records and databases. It ensures that risks are identified promptly, and appropriate regulatory actions are taken, including issuing warnings, modifying usage guidelines, or even withdrawing drugs from the market.

Pharmacovigilance and Ayurvedic Drugs

Ayurvedic drugs, derived from the ancient Indian system of medicine, are made from natural substances such as herbs, minerals, and animal products. Ayurveda has been used for thousands

of years, and its holistic approach to healing emphasizes balance within the body, mind, and spirit. However, despite its rich history, Ayurvedic drugs also need to be assessed for safety in the same manner as modern pharmaceuticals.

1. Complexity of Ayurvedic Formulations

Ayurvedic drugs are often polyherbal formulations, meaning they consist of a combination of several herbs. Additionally, some Ayurvedic formulations may contain metals and minerals, such as gold, silver, or mercury, which are used in a specific form known as **Bhasmas** (calcined preparations). The complexity of these formulations makes it difficult to predict all potential drug interactions or adverse reactions.

For instance, when herbs are combined in specific formulations, they may interact with one another in ways that are not fully understood. While traditional Ayurvedic texts provide guidelines on how to use these formulations safely, it is still essential to assess them scientifically through modern Pharmacovigilance practices. This helps ensure that the formulations are safe for use in diverse populations, including those with varying health conditions or those who may be taking other medications concurrently.

2. Variability in Quality of Raw Materials

The quality of Ayurvedic drugs depends heavily on the quality of the raw materials used in their preparation. Factors such as the geographic location where the herbs are grown, the time of harvest, and the processing techniques can all influence the quality of the final product. Additionally, there have been instances where herbal products were found to be contaminated with heavy metals, pesticides, or microorganisms due to poor agricultural or manufacturing practices.

Pharmacovigilance plays a vital role in monitoring and controlling the quality of raw materials used in Ayurvedic drugs. By reporting adverse events linked to specific batches of drugs, it becomes easier to identify the source of contamination or poor-quality raw materials. This feedback loop ensures continuous quality improvement and enhances the safety of Ayurvedic products.

3. Safety Monitoring for Widespread Use

The popularity of Ayurvedic medicine has been growing not only in India but also globally. As a result, there is a need to ensure that these drugs are safe for use in different populations with varying genetics, lifestyles, and dietary habits. Ayurvedic formulations that have been used safely for centuries in certain communities may produce unexpected effects when used in different populations.

Pharmacovigilance systems allow for the collection of data on the effects of Ayurvedic drugs across diverse groups of people. For example, certain Ayurvedic drugs may interact with commonly used Western medications or with certain foods, leading to adverse effects. By actively monitoring these interactions and reporting them through Pharmacovigilance systems, healthcare providers can adjust treatment plans accordingly, ensuring patient safety.

4. Addressing Misuse and Over-the-Counter Availability

Many Ayurvedic medicines are available over-the-counter (OTC), meaning that they can be purchased without a prescription. This accessibility can lead to misuse or overuse of Ayurvedic products, especially when patients self-medicate without understanding the appropriate dosages or potential side effects. For instance, some individuals may believe that because Ayurvedic medicines are "natural," they are entirely safe and can be taken in large quantities without risk. However, excessive use of certain herbs or mineral-based formulations can lead to toxicity.

Pharmacovigilance helps address this issue by tracking patterns of misuse and overdose. Reports of adverse reactions can provide valuable insights into how patients are using Ayurvedic products in

real-world settings, allowing for targeted public health campaigns or regulatory changes that promote safe use.

5. Integration with Modern Healthcare

As the integration of Ayurvedic medicine with modern healthcare systems increases, there is a growing need for Pharmacovigilance to bridge the gap between traditional knowledge and modern scientific standards. This integration involves combining the principles of Ayurveda with the rigorous safety standards of modern medicine to provide patients with the best possible care.

Pharmacovigilance systems can help in this integration by providing evidence-based data on the safety and efficacy of Ayurvedic medicines. For example, clinical trials and post-marketing surveillance can provide insights into how Ayurvedic drugs perform in comparison to modern pharmaceuticals or when used alongside them. This information can guide healthcare providers in making informed decisions about prescribing Ayurvedic treatments and managing potential drug interactions.

6. Regulatory Compliance

Pharmacovigilance also plays an essential role in regulatory compliance for Ayurvedic drugs. Many countries, including India, have regulations in place that require manufacturers of traditional medicines to monitor the safety of their products and report any adverse reactions. In India, the Ministry of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homoeopathy) has established a national Pharmacovigilance program specifically for Ayurvedic, Siddha, and Unani medicines.

This program ensures that Ayurvedic drugs meet the necessary safety standards and comply with both national and international regulations. By collecting and analyzing data on adverse drug reactions, the Pharmacovigilance program helps regulatory authorities make informed decisions about the approval, labeling, and marketing of Ayurvedic drugs.

7. Ensuring Global Acceptance of Ayurvedic Medicines

As Ayurvedic medicine continues to gain international recognition, there is a growing need for Pharmacovigilance to ensure that Ayurvedic products meet the safety standards required by global regulatory bodies. For instance, countries such as the United States and European nations have strict regulations for the importation and sale of herbal medicines.

By implementing robust Pharmacovigilance systems, the Ayurvedic industry can demonstrate its commitment to product safety and quality. This, in turn, enhances consumer trust and opens up opportunities for the global expansion of Ayurvedic products.

Pharmacovigilance and Its Use in ASU & H

Pharmacovigilance is the science dedicated to reduce the risk of drug-related harms to patients. In India, National Pharmacovigilance Program under the control of Central Drug Standards Control Organization (CDSCO) has initiated during 2003. WHO emphasizes that, traditional medicines are to be included into pharmacovigilance system and has published guidelines on safety monitoring of herbal medicines in pharmacovigilance systems in 2004.

The nationwide programme under central sector scheme funded by Ministry of AYUSH, New Delhi for ASU & H drugs to establish and manage a data base of Adverse Drug Reactions (ADR) for developing system wise database of adverse drug reactions and evolving evidence based recommendations towards clinical safety of ASU & H Drugs. Besides this; the program also undertake surveillance of objectionable or misleading advertisements.

Since ages Ayurveda, Siddha and Unani systems are being practised in India. In this era of globalization, concerns are being raised with regards to their clinical safety. Ayurveda has categorized toxic plants separately and for their use

special processing is essential. There is a wide spread misconception that all drugs of "natural" origin are "safe". There is also a common belief that long term use of a medicine based on tradition, assures both safety and efficacy. Further when ASU & H medicines are used in conjunction with other medicines, there is a possibility of drug interactions. There are also examples of ASU & H medicines being adulterated or contaminated with allopathic medicines, chemicals such as corticosteroids, non-sterodial anti-inflammatory agents etc. Further many ASU & H drugs are manufactured for global use and they have moved beyond the traditional and cultural framework for which they were originally intended. Currently, majority of adverse events related to the use of herbal / traditional products that are reported are attributed either due to poor product quality or to improper use.

ASU & H systems of medicines have their own principles and have their own pharmacopoeia, but at times even are practised in the country as OTC drugs without any authentic prescription.

Considering the growing use of ASU & H products and medicines globally; inclusion of traditional medicines in Pharmacovigilance systems became equally important. Pharmacovigilance is defined as the detection, assessment and prevention of adverse drug reactions in humans.

Ministry of AYUSH, Government of India, New Delhi has initiated the Pharmacovigilance Program for ASU & H drugs. Worldwide movement for the improvement of patient safety gains momentum, the subject of drug safety becomes even more prominent. Pharmacovigilance is the science dedicated to reduce the risk of drug-related harms to the consumers. Looking into the conditions prevailing in the present scenario, it is high time to deliberate regarding the concerns over traditional and classical Ayurvedic, Siddha, Unani and Homoeopathy products and practices. Thus the program is initiated to collect, collate and analyze data to establish evidence for clinical safety of ASU & H drugs in a scientific manner for documenting clinical evidence of safety and to undertake surveillance of misleading advertisements of ASU & H drugs and improper advertisements of ASU & H drugs for regulatory actions.

The program shall be coordinated by NPvCC under the supervision of Ministry of AYUSH, New Delhi that would monitor the program and also recommend regulatory interventions based on the generated Adverse Drug Reaction (ADR) data and objectionable advertisements.

Objectives

The National Pharmacovigilance Programme for ASU medicines will have the following objectives.

1. Short term objectives– To develop the culture of notification
2. Medium-term objectives– To involve healthcare professionals and professional associations in the drug monitoring and information dissemination processes.
3. Long term objectives– To achieve operational efficiencies that would make National Pharmacovigilance Programme for ASU drugs a benchmark for global drug monitoring endeavours.

Pharmacovigilance is defined as the detection, assessment and prevention of ADR in humans. It is the process of–

- Monitoring medicines as used in every day practice to identify previously unrecognised adverse effects or changes in the patterns of their adverse effects.
- Assessing the risks and benefits of medicines in order to determine what action, if any, is necessary to improve their safe use.
- Providing information to uses to optimise safe and effective use of medicines.
- Monitoring the impact of any action taken.

Adverse Drug Reaction (ADR)

WHO Technical Report No. 498 (1972); A response to a drug which is noxious and unintended, and which occurs at doses normally

used in man for the prophylaxis, diagnosis or therapy of disease or for the modification of physiological function.

Comment : This basic definition includes all doses prescribed clinically, but is intended to exclude accidental or deliberate overdose. The sub classification of unexpected was included to facilitate understanding of the type of adverse reaction which is most important to report to drug monitoring agencies.

Unexpected adverse reaction

An adverse reaction the nature or severity of which is not consistent with domestic labelling or market authorization or expected from characteristics of the drug.

Serious adverse event or reaction

A serious adverse event or reaction is any untoward medical occurrence that at any does :

- Results in death
- Requires in patient hospitalisation or prolongation of existing hospitalisation
- Results in persistent or significant disability / incapacity
- Is life-threatening

To avoid any confusion or misunderstanding of the difference between the terms serious and severe the following note of clarification is provided.

The term severe is not synonymous with serious. Severe is used to describe the intensity (severity) of a specific event (as in mild, moderate or severe). the event itself, however, may be of relatively minor medical significance (such as severe headache). Seriousness (not severity) which is based on patient/even outcome or action criteria serves as guid for defining regulatory reporting obligations.

Most common types of adverse effects

Type A : Adverse Effects (Drug actions)

Pharmacological adverse effects :

- Common (>1%)
- Dose relationship
- Suggestive time relationship
- Reproducible

Occurring in special situations or patients with increased susceptibility :

- Organ selective injury
- Late effects
- Carcinogenicity, Mutagenicity
- Interactions
- Risk situations
- Childhood
- Adolescent
- The elderly
- Renal failure
- Haemodialysis
- Pregnancy
- Lactation
- Psychological Effect

Type B: Adverse Effects (Patient reactions)

Immunoallergic reactions :

- Metabolic intolerance
- Idiosyncrasy
- Rare (<1%)
- Unexpected
- Causality uncertain
- Mechanism uncertain
- No dose relationship
- Not reproducible experimentally
- Characteristic, serious
- Suggestive time relationship
- Low background frequency

Type C : Adverse Effects (statistical effects)

Increased frequency of 'spontaneous' disease :

- High background frequency
- Less typical for a drug reaction
- No suggestive time relationship
- Often long latency
- Mechanism unknown

- Difficult to reproduce experimentally

Central Sector Scheme of Pharmacovigilance of Ayurveda, Siddha, Unani and Homeopathy Drugs

The Ministry of AYUSH has introduced new Central Sector scheme for promoting pharmacovigillance of Ayurveda, Siddha, Unani and Homeopathy (ASU&H) Drugs. Prime objective of the scheme is to develop the culture of documenting adverse effects and undertake safety monitoring of Ayurveda, Siddha, Unani and Hemopathy drug and surveillance of misleading advertisements appearing in the print and electronic media.

The scheme intends to facilitate the establishment of three-tier network of National Pharmacovigilance Centre (NPvCC), Intermediary Pharmacovigilance Centres (IPvCCs) and Peripheral Pharmacovigilance Centres (PPvCC). All India Institute of Ayurveda, New Delhi, has been designated as National Pharmacovigilance Centre. In the initial phase of implementation, five National Institutes of AYUSH are designated as the intermediary.

Pharmacivigilance Centres and forty-two (42) institutions of AYUSH having clinical facilities as Peripheral Pharmacovigilance Centres. It is intended to have more such centres across the country and achieve the target of 100 peripheral.

Pharmacovigilance centres by 2020. Representatives of Central Drug Standards Control Organisation as the national drug regulatory authority and the Indian Pharmacopoeia Commission being the WHO Collaborating Centre for Pharmacovigilance in the country are associated in the initiative as mentor and guide.

Pharmacovigilance is more than spontaneous reporting alone and the evaluation of medicines is more than pharmacovigilance. It is the branch dealing with adverse drug reactions (ADRs), their recognition, and reporting. ADR is defined by the World Health Organization (WHO) as a response to a drug that is noxious, unintended, and which occurs at doses normally used in man for prophylaxis, diagnosis or therapy of disease or for the modification of a physiological function.

Pharmacovigilance is defined by the WHO as a science, with activities that relate to the detection, assessment, understanding, and prevention of adverse effects or any other drug-related problems.

The common myth regarding herbal medicines is that these medicines are completely safe and can therefore be safely consumed by the patient on his/her own, without a physician's prescription. This belief has led to large-scale self-medication by people all over the world, often leading to disappointing end-results, side effects, or unwanted after effects. Hence, AYUSH practitioners and consumers now need to be vigilant about the safety monitoring of drugs in the interest of Public Health.

Pharmacovigilance initiative will facilitate detection of potentially unsafe ASU&H medicines and misleading advertisements for taking regulatory action against them. The Standing Finance Committee (SFC) chaired by Secretary (AYUSH) approved the scheme on November 1, 2017 and subsequently it was rolled out for implementation in the country near the end of financial year 2017-18.

Centres of Pharmacovigilance of ASU & H Drugs

Programme Management Unit (PMU) → Ministry of AYUSH

National Pharmacovigilance → All India Institute of Ayurveda, N. Delhi Centre (NPvCC).

Intermediary Pharmaco-vigilance (5)	NIA Jaipur	ITRA Jamnagar	NIS Chennai	NIUM Bengaluru	NIH Kolkata
	1. Central Ayurved Research Ins. for Cardio Vascular Diseases N. Delhi	1. Central Ayu. Research Ins. for drug level. Kolkata	1. Siddha Central Research Ins. Chennai	1. CRIUM Hydera bad	1. CRIH Noida
	2. Central Ayu. Research Ins for Cancer Mumbai	2. Regional Ayu. Research Inst. for metabolic disorder, Bengalore	2. Siddha Reg. Research Inst. Puducherry	2. CRIUM Lucknow	2. NHRI in Mental Health Kottayam
	3. Regional Ayu. Research Ins. for Drug Development Gwalior	3. NE Inst. of Ayu. & Homo. Shillong	3. Siddha Reg. Reaserch Inst. Thiruvamnt	3. RRIUM Mumbai	3. RRIH Guwahati
Peripheral Pharma-covigilance centres [PPvCCS]-42	4. RGPG Ayu. College Paprola HP	4. VPSV Ayu. College Kottakkal	4. Govt. Siddha Med. Coll. Palayam Kotta	4. RRIUM Chennai	4. RRIH Kolkata
	5. Uttarakhand Ayu. Uni. Dehradun	5. KLE college of Ayurveda Belagaum	5. Govt. Siddh Med. Coll. Chennai	5. RRIUM Srinagar	5. RRIH Mumbai
	6. Govt. Ayu. College Raipur	6. SDM Ayu. College Hassan	6. Govt. Distt. HQ Hospital Erode	6. RRIUM N. Delhi	6. RRIH Gudivada
	7. Ayu. College Bhartiya Vidya-path Pune		7. Govt. Disst. HQ. Hospital (Siddhawing) Trichy		7. Govt Homoeo. medical coll. & Hospital Bhopal
	8. Pt. Khushilal Ayu. College. Bhopal		8. Govt. Distt HQ. Hospital Dindigul		
	9. Campus. Ayu. Coll.		9. Govt. Distt. HQ. Hospital Siddha wing Cudhalore		
	10. MMM Ayu. Col. Udaipur		10. Govt. Distt. HQ. Hospital Villupuram		
	11. Ch. B.P. Ch. Ayu. Samsthan Delhi				
	12. Govt. Dhanvantari Ayu. Med. Coll. Ujjain				
	13. Faculty of Ayurveda BHU, Varanasi				

Reporting Form for Suspected Adverse Reactions National Pharmacovigilance Program for ASU & H Drugs

Note :
Personal information will be kept confidential.
All suspected reactions are to be reported with relevant details.

Ay-AIIA	Ay-NIA	Ay-IPGT	Un-NIUM	Si-NIS	Ho-NIH
Code of Peripheral Centre		ADR Number / Year			

1. Patient / consumer identification (please complete or tick boxes below as appropriate)

Patient Initials:	Patient Record Number (PRN)
Place of Birth / IPD / OPD	
Address: Village / Town: Post / Via: District / State:	Age: Sex: Male / Female / Others
Diagnosis:	Constitution and Temperament:

2. Description of the suspected Adverse Reactions

Date and time of initial observation	
Description of reaction	

3. Whether the patient is suffering with any chronic disorders?

Hepatic Renal Cardiac Diabetes Any Others (Specify, if others)

4. Addictions, if any? If yes, please specify:

5. H/O previous allergies / Drug reactions, if any: If yes, please specify:

6. List of all ASU & H drugs used by the patient during the period of one month:

Name of the drug	Manufacturer / Batch no.	Dose	Form / Route of administration	Date of		Reason for use	Any unwanted occurr-ences
				Starting	Stopped / Continued		

7. List of other drugs used by the patient during the period of one month:

Name of the drug	Manufacturer / Batch no.	Dose	Form / Route of administration	Date of		Reason for use	Any unwanted occurr-ences
				Starting	Stopped / Continued		

8. **Details of the drug suspected to cause ADR:**
   a. Name of the drug:
   b. Manufacturing date and Expiry date (if available):
   c. Remaining pack / label (if available):
   d. Consumed orally along with (water / milk / honey / or any other)
   e. Whether any dietary precautions have been prescribed?
      If yes, please specify:
   f. Whether the drug is consumed under medical supervision or used as self medication.
   g. Any other relevant information associated with drug use:

9. **Management provided / taken for suspected adverse reaction**

10. **Please indicate outcome of the suspected adverse reaction (tick appropriate)**

<table>
<tr><td>Recovered:</td><td>Not recovered:</td><td>Unknown:</td><td>Fatal:</td><td>If Fatal
Date of death:</td></tr>
<tr><td rowspan="2">Severe: Yes / No.</td><td colspan="4">Reaction abated after drug stopped or dose reduced:</td></tr>
<tr><td colspan="4">Reaction reappeared after re administration of drug:</td></tr>
<tr><td colspan="5">Was the patient admitted to hospital? If yes,
give name and address of hospital</td></tr>
</table>

11. **Any abnormal findings of relevant laboratory investigations related to the episode done pre and post episode of ADR:**

12. **Particulars of ADR Reporter:**

Please tick: Patient / Attendant / Nurse / Doctor / Pharmacist / Health worker / Drug Manufacturer / Any others (please specify)

Name:
Address:
Telephone / E - mail:

Signature of the reporter: **Date:**

Please send the completed form to: The centre from where the form is received or to
The Coordinator, National Pharmacovigilance Coordination Centre (NPvCC)
All India Institute of Ayurveda (AIIA), Mathura Road, Gautam Puri,
Sarita Vihar, New Delhi - 110 076
E-mail: pharmacovigilanceayush@gmail.com, ayush-pharmavig@aiia.gov.in

The ADR Probability Scale

(Program Coordinator has to fill this scale)

	Questions	Yes	No	Don't Know
1	Are there previous conclusive reports on the reactions?	+1	0	0
2	Did the ADR appear after the suspected drug was administered?	+2	-1	0
3	Did the ADR improve when the drug was discontinued a specific antagonist was administered?	+1	0	0
4	Did the adverse reaction reappear when the drug was re-administered?	+2	-1	0
5	Are there alternatives causes that could solely have caused the ADR?	-1	+2	0
6	Was the drug detected in the blood (or other fluids) in a concentration known to be toxic?	+1	0	0
7	Was the reaction more severe when the dose was increased, or less severe when the dose was decreased?	+1	0	0
8	Did the patient have a similar reaction to the same or similar drugs in any previous exposure?	+1	0	0
9	Was the adverse event confirmed by objective evidence?	+1	0	0
	Total Score			

Score: > 9 = Certain; 5-8 = Probable; 1-4 = Possible; 0 = Unlikely

The Suspected Adverse Event	Grade - 1 (Mild)
	Grade - 2 (Moderate)
	Grade - 3 (Severe)
	Grade - 4 (Threatening)
The Suspected Adverse Event	Serious
	Non-Serious

The Suspected Adverse Event is due to	Physician
	Patient
	Drug
	Other factors*

Signature

Program Coordinator

MCQs

1. Which of the following herbal drugs should be always used in Fresh form?
   A) Guduchi B) Kutaj
   C) Shatavari D) all the three
2. According to Sharangdhar samhita, shelf life of Laghupaki Aushadhi is
   A) 2 years B) 6 months
   C) 2 months D) 1 year
3. Formulations used for the treatment of Urdhwajatrugata Vikara, following Sevan Kala is suggested by Acharya Sharngdhara
   A) Pratha
   B) Bhojan Madhey
   C) Bhojan Pashchyat
   D) Nishi
4. For treatment of Apan Vayu Vikruti, Bheshaj should be administered infollowing manner
   A) Pratha
   B) Bhojan Madhey
   C) Bhojan Pashchyat
   D) Nishi
5. To achieve Medhya Karma of Shankhapushpi, it should be converted intofollowing formulation
   A) Kalka B) Swarasa
   C) Kwatha D) Syrup
6. To achieve Medhya Karma of Yashtimasdhu, it should be administeredwith following anupana
   A) Gomutra B) Godugdha
   C) Goghrita D) Godadhi
7. Sitopaladi Choorna is indicated in following disease
   A) Hrudrog B) Pleehodar
   C) Amlapitta D) Rajyakshma
8. Sanjivani Vati is indicated in following disease
   A) Hridrog B) Pleehodar
   C) Amlapitta D) Visuchika
9. Dose of Sanjivani Vati in the treatment of Aamajeerna is
   A) 1 Gunja B) 5 Gunja
   C) 2 Gunja D) 3 Gunja
10. Dose of Sanjivani Vati in the treatment of Visuchika is
    A) 1 Gunja B) 5 Gunja
    C) 2 Gunja D) 3 Gunja
11. Dose of Sanjivani Vati in the treatment of Sarpadansha is
    A) 1 Gunja B) 4 Gunja
    C) 2 Gunja D) 3 Gunja
12. Bhavana Dravya of Sanjivani Vati is
    A) Godugdha
    B) Kumari Swarasa
    C) Gomutra
    D) Nimba Swarasa
13. Bhavana Dravya of KankayanGutika is
    A) Triphala Kwatha
    B) Tikatu Kwatha
    C) Bijapur Swarasa
    D) Kumari Swarasa
14. Main indication for the use of Kaishor Guggulu is
    A) Kasa B) Rajayakshma
    C) Vatavyadhi D) Vatarakra
15. Therapeutic dose of Guti-Vati as per Sharangdhar Samhita is
    A) $^1/_2$ Karsha B) 1 Karsha
    C) 2 pala D) 4 pala
16. Lavan Bhaskar choorna is given with following anupan
    A) Dadhimastu B) Takra
    C) Sura D) all three

17. Shelf life of Avaleha Kalpana as per Sharangdhar Samhita is
A) 6 months B) 1 Year
C) 2 Years D) 6 Years

18. Dose of Avaleha according to Sharangdhar Samhita is
A) 1 Pala B) 1 Tola
C) 2 Pala D) 6 Tola

19. The main ingredients of Kushmandavleha are
A) Haritaki, Guda
B) Kushmanda, Guda
C) Kushmanda, Sharkara
D) Amalaki, Sharkara

20. He processes conducted on 'Swedit Amalaki' in the manufacture of Chyavanprasha are
A) Prapeedan, Kurchan
B) Prapeedan, Bharjan
C) Pachan, Kurchan
D) Bharjana

21. Sneha drugs used in preparation of Chyavanprasha according to Charak Samhita
A) Ghrita, Vasa B) Ghrita, Tila taila
C) Vasa, Tila taila D) Vasa, Majja

22. The quantity of Amalaki Phala recommended in Chyavanprasha is
A) 100 in number B) 50 in number
C) 1000 in number D) 500 in number

23. The specific metallic container used in the preparation of Kushmandavalehais
A) Kansya B) Suvarna
C) Tamra D) Loha

24. General Anupana recommended in the administration of Avalehaformulations is
A) Godugdha B) Jala
C) Gomutra D) None of these

25. Arjun Kshirapaka is indicated in following disease
A) Pittaj Hrudrog B) Kaphaj Hrudrog
C) Vataj Hrudrog D) Krimij Hrudrog

26. Tandulodak is used as an anupan in the treatment of
A) Jwara B) Shwetapradar
C) Amlapitta D) Shwasa

27. One of the ingredients of Shadangpaniya is
A) Kutaki B) Shatavari
C) Nagar D) Vasa

28. Shadangpaniya is indicated in following disease
A) Jwara B) Pleehodar
C) Parinam Shool D) Raktapitta

29. Erimedadi Taila is used to cure
A) Karna roga B) Vata roga
C) Netra roga D) Danta roga

30. One of the ingredients of Jatyadi Ghrita which is of Pranij origin is
A) Shankha B) Milk
C) Siktha D) Tuttha

31. According to Shusrut Samhita, Hastidanta Mashi is applied topically incombination to
A) Chandan B) Raktachandan
C) Rasanjan D) all of three

32. Quantity of Ghrita that has to be added to Dashanga Lepa while applying is
A) 1/5 of the other contents
B) 1/6 of the other contents
C) 1/4 of the other contents
D) 1/2 of the other contents

33. Liquid media used along with Doshagna Lepa is
A) Godugdha B) Aaranal
C) Madhu D) Gomutra

34. In the preparation of Arogyavardhini, bhavana is carried out using....
A) Katukakwath B) Nimba Swarasa
C) Godugdha D) None of these

35. Bhavana dravya of Laghusutshekhar Rasa is
A) Kumari B) Nagavalli
C) Bhrungaraj D) Dadima

36. This parpati contains a herbal ingredient
A) Bola parpati B) Tamra parpati
C) Kutajparpati D) all of these

37. Following parpati is indicated in shwasavyadhi
A) Shweta parpati B) Tamra parpati
C) Kutajparpati D) Rasa Parpati

38. Dhatu Bhasma used in Arogyavardhini formulation is
A) Suvarna bhasma
B) Naga Bhasma
C) Abhrakbhasma
D) Vanga Bhasma

39. Adhikar of Panchamrutparpati according to Yogaratnakara is
A) Grahani B) Agnimandya
C) Rajayakshma D) Amlapitta

40. Indication of Guduchi Swarasa with Madhu
A) Prameha B) Agnimandya
C) Rajayakshma D) Amlapitta

41. Indication of Guduchyadi Churna
A) Yakruta Roga B) Astha Jwara
C) Pandu D) All the above

42. Indication of Guduchi Kwatha and Pippali
A) Yakruta Roga B) Jwara
C) Pandu D) All the above

43. Indication of Guduchi Hima with Makshika
A) Chardi B) Astha Jwara
C) Pandu D) All the above

44. Indication of Guduchi Ghana
A) Yakruta B) Pandu
C) Atisara D) Amavata

45. Indication of Guduchi Satva
A) Prameha B) Jirna Jwara
C) Raktapitta D) All the above

46. Indication of Amruthadi Guggulu
A) Kustha B) Arsha
C) Amavata D) All the above

47. Indications of Amritarishta
A) All types of Jwara
B) Amavata
C) Pandu
D) All the above

48. Indications of Amalaki Swarasa
A) Prameha
B) Amlapitta
C) Amavata
D) All the above

49. Indication of Amalakyadi Churna
A) Sarva Jwara Nashaka
B) Kamala
C) Pandu
D) All the above

50. Indication of Chyavanaprasha
A) Kasa
B) Kshtasheena
C) Vata Shonita
D) All the above

51. Indication of Dhatri Lauha
A) Kamala B) Mukha Shosha
C) Pandu D) All the above

52. Indication of Phalatrikadi Kwatha
A) Kamala B) Mukha Shosha
C) Jwara D) All the above

53. Indication of Triphala Ghriita
A) Netra Roga B) Kandu
C) Timira D) All the above

54. Indication of Bhallataka Modaka
A) Pleeha Roga B) Mukha Shosha
C) Jwara D) All the above

55. Indication of Bhallataka Ghrita
A) Gulma B) Mukha Shosha
C) Jwara D) All the above

56. Indication of Bhallataka Guda
A) Kustha B) Arsha
C) Kamala D) All the above

57. Indication of Bhallataka Taila
A) Kustha B) Nadi Vrana
C) Kamala D) All the above

58. Indication of Bhallataka Avaleha
A) Kustha B) Arsha
C) Kamala D) Rasayana

59. Indication of Bhallataka Lepa
A) Kustha B) Arsha
C) Kamala D) All the above

60. Indication of BhallatakadiKwatha
A) Kustha B) Arsha
C) Kamala D) Urustambha

61. Indication of Gandhaka Churna
A) All types of Kustha
B) Arsha
C) Kamala
D) Urustambha

62. Indication of Gandhaka Rasayana
A) Kustha B) Kandu
C) Visha Vikara D) All the above

63. Indication of Gandhaka Druti
A) Kasa B) Pandu
C) Grahani D) All the above

64. Indication of Gandhaka Taila
A) Kustha B) Kamala
C) Visha Vikara D) All the above

65. Indication of Gandhaka Malahara
A) Jwara B) Pama
C) Visha Vikara D) All the above

66. Indication of Gandhaka Vati
A) Kustha B) Agnimandya
C) Visha Vikara D) All the above

67. Indication of Gairika Pradeha
A) Visarpa B) Jwara
C) Visha Vikara D) All the above

68. Indication of LaghusutaShekhara Rasa
A) Pittaja Shirashula
B) Suryavarta
C) Daha
D) All the above

69. Indication of Gairika Malahara
A) Visarpa B) Jwara
C) Kandu D) All the above

70. Indication of Gairika Gutikarajana
A) Visarpa B) Jwara
C) Abhishyanda D) All the above

71. Indication of Gairika Rasakriya
A) Netra Roga B) Jwara
C) Visha Vikara D) All the above

72. Indication of Abhraka Bhasma along with Rasasindura
A) Jwara B) Kushta
C) Visha Vikara D) All the above

73. Indications of Abhraka Bhasma along with Pippali Churna
A) Jirna Jwara B) Kushta
C) Visha Vikara D) All the above

74. Indication of Abhraka Bhasma along with Trikatu Churna and Ghruta
A) Grahani B) Kushta
C) Visha Vikara D) All the above

75. Indication of Abhraka Bhasma along with Haritaki Churna, Guda, Ela, Vasa Swarasa
A) Grahani B) Kushta
C) Raktapitta D) All the above

76. Indication of Abhraka Bhasma along with Haridra Churna, Pippali Churna and Madhu
A) Grahani B) Prameha
C) Visha Vikara D) All the above

77. Indication of Abhraka Bhasma along with Swarna Bhasma
A) Grahani B) Kshaya
C) Visha Vikara D) All the above

78. Indication of Abhraka Bhasma along with Guduchi Satva
A) Prameha B) Kushta
C) Visha Vikara D) All the above

79. Indication of Abhraka Bhasma along with Shuddha Bhallataka and Ghruta
A) Arsha B) Kushta
C) Visha Vikara D) All the above

80. Indication of Swarna Makshika Bhasma with Shuddha Shilajatu, Abhraka Bhasma and Vidanga Churna along with Madhu
A) Arsha B) Rajayakshma
C) Visha Vikara D) All the above

81. Indication of Swarna Makshika Bhasma with Yava Kshara
A) Mutrakruccha B) Kushta
C) Visha Vikara D) All the above

82. Indication of Swarna Makshika Bhasma with Punarnava, Guduchi, Shunthi and Daruharidra
A) Shotha B) Kushta
C) Visha Vikara D) All the above

83. Indication of Swarna Makshika Bhasma with Kanchanara Twaka Swarasa
A) Manasika Vikara
B) Kushta
C) Visha Vikara
D) All the above

84. Indication of Swarna Makshika Bhasma with Ativisha and Karanja Beeja
A) Vishama Jwara
B) Kushta
C) Visha Vikara
D) All the above

85. Indication of Swarna Makshika Bhasma with Pippali and Bibhitaki Churna
A) Vishama Jwara
B) Kushta
C) Kasa
D) All the above

86. Indication of Swarna Makshika Bhasma with Samagandhika Kajjali along with Madhu
A) Vishama Jwara
B) Kushta
C) Raktapitta
D) All the above

87. Indication of Swarna Makshika Bhasma with Rasasindura, Abhraka Bhasma and Trikatu Churna
A) Vishama Jwara
B) Kushta
C) Garbhini Jwara
D) All the above

88. Indication of Swarna Bhasma with Rasa Parpati
A) Vishama Jwara
B) Garbhini Roga
C) Kasa
D) All the above

89. Indication of Swarna Bhasma with Abhraka Bhasma
A) Vishama Jwara B) Garbhini Roga
C) Jirna Jwara D) All the above

90. Indication of Swarna Bhasma with Guduchi Satva
A) Vishama Jwara B) Garbhini Roga
C) Pandu Roga D) All the above

91. Indication of Swarna Bhasma with Abhraka Bhasma, Rasa Sindura and Mukta Pisti
A) Vishama Jwara B) Garbhini Roga
C) Rajayakshma D) All the above

92. Indication of Swarna Bhasma with Amalaki Churna
A) Vishama Jwara B) Garbhini Roga
C) Shwasa Roga D) All the above

93. Indication of Swarna Bhasma with Abhraka Bhasma, Rasa Sindura, Sankhapuspi Churna
A) Vishama Jwara B) Garbhini Roga
C) Apasmara Roga D) All the above

94. Indication of Rajata Bhasma with Lavanga
A) PuaranaKosthagata Vata
B) Garbhini Roga
C) Jirna Jwara
D) All the above

95. Indication of Rajata Bhasma with Swarna Makshika Bhasma and Rasa Sindura along with Yamani and Chitrakamula Kwatha
A) Gridrasi, Vishwachi, Trika Vedana
B) Garbhini Roga
C) Jirna Jwara
D) All the above

96. Indication of Rajata Bhasma with Rajavarta Bhasma along with Madhu
A) Madatyaya B) Garbhini Roga
C) Jirna Jwara D) All the above

97. Indication of Rajata Bhasma with Trijataka Churna
A) Prameha B) Garbhini Roga
C) Jirna Jwara D) All the above

98. Indication of Lauha Bhasma with Twaka, Ela, Tejapatra, Nagakeshara, Sharakaraanlong with Vasa Swarasa
A) Prameha B) Garbhini Roga
C) Raktapitta D) All the above

99. Indication of Lauha Bhasma with Vasa Mula Churna, Draksha Kalka and Pippali Churna
A) Prameha
B) Garbhini Roga
C) Kasa
D) All the above

100. Indication of Lauha Bhasma with Bhrarangi Churna, Shunthi, Maricha, Pippali Churna
A) Prameha
B) Garbhini Roga
C) Shwasa
D) All the above

101. Indication of Lauha Bhasma with Samagandhaka Kajjali and Pippali Churna along with Madhu
A) Prameha B) Kaphaja Roga
C) Shwasa D) Kasa

102. Indication of Lauha Bhasma with Shunthi Churna
A) Prameha B) Vataja Roga
C) Shwasa D) Kasa

103. Indication of Lauha Bhasma with Rasasindura and Sharkara
A) Prameha B) Pittaja Roga
C) Shwasa D) Kasa

104. Indication of Lauha Bhasma with Hingu, Shunthi, Maricha and Pippali
A) Prameha B) Shula Roga
C) Shwasa D) Kasa

105. Indication of Lauha Bhasma with Amalaki, Pippali and Sharkara
A) Prameha B) Raktapitta Roga
C) Shwasa D) Kasa

106. Indication of Lauha Bhasma with Vidanga, Triphala, Musta and Apamarga Beeja
A) Prameha B) Bhasmaka Roga
C) Shwasa D) Kasa

107. Indication of Lauha Bhasma with Shilajatu along with Kusha Kwatha
A) Prameha
B) Mutrakruccha Roga
C) Shwasa
D) Kasa

108. Indication of Lauha Bhasma with Parada Bhasma and Katuki Swarsa
A) Prameha
B) Sarvanga Vata Roga
C) Shwasa
D) Kasa

109. Indication of Tamra Bhasma with Nagakeshara and cold water
A) Murccha B) Pittaja Roga
C) Shwasa D) Kasa

110. Indication of Tamra Bhasma with Ghruta and Durlabha Kwatha
A) Bhrama B) Pittaja Roga
C) Shwasa D) Kasa

111. Indication of Tamra Bhasma with Trikatu Churna and Shankha Bhasma
A) Bhrama B) Pleehodara
C) Shwasa D) Kasa

112. Indication of Tamra Bhasma with Karpura and Jiraka
A) Bhrama B) Sutika Roga
C) Shwasa D) Kasa

113. Indication of Tamra Bhasma with Trikatu Churna
A) Bhrama B) Agnimandya
C) Shwasa D) Kasa

114. Indication of Tamra Bhasma with Amalaki Churna
A) Bhrama B) Amlapitta
C) Shwasa D) Kasa

115. Indication of Tamra Bhasma with Bharangi Churna and Bibhitaki along with Madhu
A) Bhrama B) Pleehodara
C) Jwara D) Kasa

116. Indication of Tamra Bhasma with Nagakeshara, Haritaki along with Madhu
A) Bhrama B) Arsha
C) Shwasa D) Kasa

117. Indication of Tamra Bhasma with Swarna Makshika along with Nimbu Swrasa
A) Bhrama B) Hikka
C) Shwasa D) Kasa

118. Indication of Vanga Bhasma with Guduchi Satva and Madhu
A) Bhrama B) Pleehodara
C) Prameha D) Kasa

119. Indication of Vanga Bhasma with Ghruta
A) Bhrama B) Pleehodara
C) Pandu D) Kasa

120. Indication of Vanga Bhasma with Tankana Churna
A) Bhrama B) Pleehodara
C) Gulma D) Kasa

121. Indication of Vanga Bhasma with Pippali Churna
A) Bhrama B) Pleehodara
C) Agnimandya D) Kasa

122. Indication of Vanga Bhasma with Puga Phala Churna
A) Bhrama B) Pleehodara
C) Ajirna D) Kasa

123. Indication of Vanga Bhasma with Haridra Churna
A) Bhrama B) Pleehodara
C) Amlapitta D) Kasa

124. Indication of Naga Bhasma with Haridra and Amalaki Churna
A) Bhrama B) Pleehodara
C) Prameha D) Kasa

125. Indication of Naga Bhasma with Ashoka Twaka Kwatha
A) Bhrama B) Pleehodara
C) Rakta Pradara D) Kasa

126. Indication of Naga Bhasma with Nagakeshara
A) Rakta Arsha B) Pleehodara
C) Prameha D) Kasa

127. Indication of Naga Bhasma with Kapikacchu Mula, Bala Mula and Jatamasi
A) Vrukka Shotha B) Pleehodara
C) Prameha D) Kasa

128. Indication of Naga Bhasma with Swarna Bhasma, Rasasindura and Tamra Bhasma
A) Pakshaghata B) Pleehodara
C) Prameha D) Kasa

129. Indication of Yashada Bhasma with Loha Bhasma and Sarjarasa Churna
A) Pakshaghata
B) Shweta Pradara
C) Prameha
D) Kasa

130. Indication of Yashada Bhasma with Kapikacchu, Rasna, Bala and Eranda Mula Kwatha
A) Pakshaghata
B) Shweta Pradara
C) Prameha
D) Kasa

131. Indication of Yashada Bhasma with Tankana, Abhraka Bhasma and Vamshalochana
A) Pakshaghata
B) Shweta Pradara
C) Shwasa
D) Kasa

132. Indication of Kasisa Bhasma with Sarapunkha Kshara
A) Pakshaghata
B) Pleeha Roga
C) Prameha
D) Kasa

133. Indication of Kasisa Bhasma with Tankana and Kumari Sara Churna
A) Pakshaghata
B) Rajo Avarodha
C) Prameha
D) Kasa

134. Indication of Kasisa Bhasma with Twaka and Ela Churna
A) Pakshaghata
B) Rakta Alpaja Hrudya Vatha
C) Prameha
D) Kasa

135. Indication of Kasisa Bhasma with water
A) Pakshaghata
B) Visarpa
C) Prameha
D) Kasa

136. Indication of Shilajatu with Madhu
A) Mutrakruccha
B) Pleeha Roga
C) Prameha
D) Kasa

137. Indication of Shilajatu with Dashamula Kashaya
A) Mutrasthila
B) Pleeha Roga
C) Prameha
D) Kasa

138. Indication of Shilajatu with Varunadi Kwatha
A) Mutraghta
B) Pleeha Roga
C) Prameha
D) Kasa

139. Indication of Shilajatu with Loha, Swarna Makshika Bhasma, Ghruta and Madhu, Haritaki, Vidanga Churna
A) Rajayakshma
B) Pleeha Roga
C) Prameha
D) Kasa

140. Indication of Gandhaka with Triphala Kwatha
A) Rajayakshma
B) Pleeha Roga
C) Prameha
D) Urdhwa Jatrugata Roga

141. Indication of Gandhaka with Vasa Kwatha
A) Rajayakshma
B) Pleeha Roga
C) Prameha
D) Kshaya

142. Indication of Gandhaka with Kadali Phala
A) Rajayakshma
B) Pleeha Roga
C) Prameha
D) Twaka Vikara

143. Indication of Gandhaka with Tila Churna
A) Rajayakshma B) Pleeha Roga
C) Prameha D) Arsha

144. Indication of Gairika with Haridra, Amrabija Majja, Vidanga, Khadira
A) Rajayakshma B) Pleeha Roga
C) Prameha D) Yoni Kandu

145. Indication of Gairika with Saindhava Lavana, Yashtimadhu and Haridra Churna
A) Rajayakshma
B) Netra Abhishayanda
C) Prameha
D) Yoni Kandu

146. Indication of Gairika with Shunthi Churna, Aragawadha, Khatika Churna, Kataphala
A) Karma Mula Shotha
B) Pleeha Roga
C) Prameha
D) Yoni Kandu

147. Indication of Gairika with Madhu
A) Rajayakshma B) Shitapitta
C) Prameha D) Yoni Kandu

148. Indication of Gairika with Rakta Chanadana, Ushira and Dhanyaka
A) Rajayakshma B) Pleeha Roga
C) Raktapitta D) Yoni Kandu

149. Indication of Sphatika with Lavanaga, Ela and Sugar
A) Rajayakshma B) Danta Sharakara
C) Prameha D) Yoni Kandu

150. Indication of Mukta Bhasma with Rasa Sindura
A) Jwara B) Danta Sharakara
C) Prameha D) Yoni Kandu

151. Indication of Mukta Bhasma with Pravala Bhasma, Parada and Gandhaka along with Beeja pura
A) Jwara
B) Danta Sharakara
C) Rajayakshma
D) Yoni Kandu

152. Indication of Mukta Bhasma with Pravala Bhasma
A) Jwara B) Kshaya Roga
C) Prameha D) Yoni Kandu

153. Indication of Mukta Bhasma with Katuki Churna, Swarna Gairika
A) Jwara
B) Hikka Roga
C) Prameha
D) Yoni Kandu

154. Indication of Pravala Bhasma with Tandulodaka
A) Mutrakruccha
B) Hikka Roga
C) Prameha
D) Yoni Kandu

155. Indication of Pravala Bhasma with Rasa Sindura along with Gokshura Kwatha
A) Jwara
B) Hikka Roga
C) Shotha
D) Yoni Kandu

156. Indication of Vajra Bhasma with Rsa Sindura
A) Dhwajabhanga
B) Hikka Roga
C) Prameha
D) Yoni Kandu

157. Indication of Vajra Bhasma with Swarna Bhasma, Rasa Sindura
A) Rajayakshma
B) Hikka Roga
C) Prameha
D) Yoni Kandu

158. Indication of Karpada Bhasma with Rasa Sindura and Udumbara Swarsa
A) Grahani Roga
B) Hikka Roga
C) Prameha
D) Yoni Kandu

159. Indication of Shankha Bhasma with Nimbu Swarasa
A) Dhwajabhanga
B) Hikka Roga
C) Grahani
D) Yoni Kandu

160. Indication of Shankha Bhasma with Trikatu Churna
A) Agnimandya
B) Hikka Roga
C) Prameha
D) Yoni Kandu

161. Indication ofShankha Bhasma with Amalaki Churna
A) Amlapitta
B) Hikka Roga
C) Prameha
D) Yoni Kandu

162. Indication of Shankha Bhasma with Trikatu and Yava Kshara
A) Gulma
B) Hikka Roga
C) Prameha
D) Yoni Kandu

163. Indication of Shankha Bhasma with Trikatu, Saindhava and Hingu
A) Gulma
B) Shula Roga
C) Prameha
D) Yoni Kandu

164. Indication of Shankha Bhasma with Lavana Panchaka, Guda and Trikatu
A) Gulma
B) Hikka Roga
C) Parinama Shula
D) Yoni Kandu

165. Indication of Shankha Bhasma with Bharagni Churna
A) Gulma
B) Shwasa
C) Prameha
D) Yoni Kandu

166. Indication of Shankha Bhasma with Haridra and Puga Churna
A) Gulma
B) Atisara
C) Prameha
D) Yoni Kandu

167. Indication of Tankana with Trikatu and Jayaphala Chuna
A) Gulma
B) Udara Roga
C) Prameha
D) Yoni Kandu

168. Indication of Tankana with Madhu
A) Gulma
B) Mukhapaka
C) Prameha
D) Yoni Kandu

169. Indication of Tankana with Kakamachi Swarasa
A) Gulma B) Chardi
C) Prameha D) Yoni Kandu

170. Indication of Arogyavardhini Rasa
A) Jwara
B) Kustha
C) Medo Roga
D) All the above

171. Indication of Garbhaphala Rasa
A) Garbhapata
B) Grabhastrava
C) Pradara
D) All the above

172. Indication of Chandraprabha Vati
A) Prameha
B) Pandu
C) Mutrakruccha
D) All the above

173. Indication of Pravala PanchamritaRasa
A) Gulma
B) Udara
C) Kasa
D) All the above

174. Indication of Anadbhairava Rasa
A) Jwara
B) Amavata
C) Jwaratisara
D) All the above

175. Indication of Yogendra Rasa
A) Prameha
B) Mutraghata
C) Arsha
D) All the above

176. Indication of Laxmilvilas Rasa
A) Prameha
B) Dhatukshaya
C) Mustha
D) All the above

177. Indication of Vasantakusumakar Rasa
A) Prameha
B) Vali
C) Karshya
D) All the above

178. Indication of Vasanta Malti Rasa
A) Jirna Jwara
B) Vishama Jwara
C) Jirna Kasa
D) All the above

179. Indication of Brihat Vata Chitamani Rasa
A) Bhrama
B) Shwasa
C) Bala Roga
D) Kasa

180. Indication of Shankha Vati
A) Jwara
B) Grahani
C) Bala Roga
D) All the above

181. Indication of Shwaskruthara Rasa
A) Kasa
B) Shwasa
C) Agnimandya
D) All the above

182. Indication of Kamadudha Rasa
A) Jwara
B) Bhrama
C) Amlapitta
D) All the above

183. Indication of Sutashekhara Rasa
A) Amlapitta
B) Chardi
C) Kasa
D) All the above

184. Indication of Navayasa Loha
A) Pandu
B) Hrudya Roga
C) Arsha
D) All the above

185. Indication of Ichacchabhedi Rasa
A) Virechana
B) Shwasa
C) Bala Roga
D) All the above

186. Indication of Krimikuthara Rasa
A) Krimi Roga
B) Shwasa
C) Bala Roga
D) All the above

187. Indication of Panchamruta Parpati
A) Arsha
B) Chardi
C) Atisara
D) All the above

188. Indication of Bola Parpati
A) Rakta Pradara
B) Raktapitta
C) Rakta Atisara
D) All the above

189. Indication of Swarna Vanga
A) Jirna Kasa
B) Shwsa
C) Prameha
D) All the above

190. Indication of Makaradhwaja
A) Vali
B) Palitya
C) Rasayana
D) All the above

191. Indication of Sameerpannga Rasa
A) Jwara
B) Kasa
C) Shwasa
D) All the above

192. Indication of Hemagarbha Pottali
A) Sannipataja Jwara
B) Raktapitta
C) Rakta Atisara
D) All the above

193. Indication of Dashamula Kwatha
A) Sannipataja Jwara
B) Kasa Shwasa
C) Parshwashula
D) All the above

194. Indication of MahamanjistadiKwatha
A) Kustha
B) Vatarakta
C) Shlipada
D) All the above

195. Indication of Pushyanuga Churna
A) Shweta Pradara
B) Rajodosha
C) Yoni Dosha
D) All the above

196. Indication of Sudarshana Churna
A) Pleeharoga
B) Yakruta Roga
C) Gulma
D) All the above

197. Indication of Lavana Bhaskara Churna
A) Gulma
B) Arsha
C) Grahani
D) All the above

198. Indication of Bulvadi Gutika
A) Luta Visha
B) Sarpa Visha
C) Ajirna
D) All the above

199. Indication of Sanjivani Vati
A) Gulma
B) Visuchika
C) Sarpa damsha
D) All the above

200. Indication of Vyoshadi Vati
A) Pinasa
B) Kasa Shwasa
C) Pratishaya
D) All the above

201. Indication of Bala Chaturbhadra Rasa
A) Jwaratisara
B) Kasa Shwasa
C) Vamana
D) All the above

202. Indication of Simhanada Guggulu
A) Kanja
B) Kasa Shwasa
C) Gulma
D) All the above

203. Indication of Yogaraja Guggulu
A) Amavata
B) Arsha
C) Gulma Udara
D) All the above

204. Indication of Dadimavaleha
A) Jwaratisara
B) Shopha
C) Kshaya
D) All the above

205. Indication of Panchagavya Ghruta
A) Jwara
B) Apasmara
C) Unmada
D) All the above

206. Indication of Brahmi Ghrita
A) Kushta
B) Apasmara
C) Unmada
D) All the above

207. Indication of Narayana Taila
A) Galagraha
B) Shosha
C) Kshina Shukra
D) All the above

208. Indication of Neelibhringadi Taila
A) Palitya
B) Apasmara
C) Unmada
D) All the above

209. Indication of Panchaguna Taila
A) Sandhigata Vata
B) Karna Shula
C) Varnaopachara
D) All the above

210. Indication of Ashokarishta
A) Asrigdara Rija
B) Jwara
C) Arsha
D) All the above

211. Indication of Kumaryasava
A) Parinama Shula
B) Apasmara
C) Prameha
D) All the above

212. Indication of Kutajarishta
A) Jwara
B) Grahani
C) Raktaisara
D) All the above

213. Indication of Gandhakaya Malahara
A) Pamahara
B) Apasmara
C) Unmada
D) All the above

214. Indication of Lepa Guti
A) Amavata
B) Shotha
C) Arbuda
D) All the above

214. Anuapana Guna..
A) Tarpaniya
B) Prinayati
C) Ujaryati
D) All the above

215. Sarpi Madhu along with Triphala Churna Indicated in
A) Kasa
B) Shwasa
C) Netra Roga
D) All the above

216. Pippali Churna with Madhu Indicated in
A) Agni Vardhana
B) Shwasa
C) Netra Roga
D) All the above

217. Rasona Kalka with Erand Kwatha indicated in
A) Agni Vardhana
B) Vata Roga
C) Netra Roga
D) All the above

218. Apamarga Kalka with Tandulodaka indicated in
A) Agni Vardhana
B) Raktarsha
C) Netra Roga
D) All the above

219. Laksha Kalka with Kushmanda Swarasa indicated in
A) Agni Vardhana
B) Rakta Kshaya
C) Netra Roga
D) All the above

220. Sudarashana Churna with Shitambhu indicated in
A) Agni Vardhana
B) Sarva Jwara
C) Netra Roga
D) All the above

221. Kaishora Guggulu with Vasadi Kwatha indicated in
A) Agni Vardhana
B) Vata Roga
C) Netra Roga
D) All the above

222. Kaishora Guggulu with Varunadi Kwatha indicated in
A) Agni Vardhana
B) Vata Roga
C) Gulma
D) All the above

223. Kaishora Guggulu with Khadira Kwatha indicated in
A) Agni Vardhana
B) Vata Roga
C) Kustha Roga
D) All the above

224. YogarajaGuggulu with Rasnadi Kwatha indicated in
A) Agni Vardhana
B) Vata Roga
C) Kustha Roga
D) All the above

225. Yogaraja Guggulu with KakolyadiRasnadi Kwatha indicated in
A) Agni Vardhana
B) Pittaja Roga
C) Kustha Roga
D) All the above

226. Yogaraja Guggulu with Aragavadhadi Kwatha indicated in
A) Agni Vardhana
B) Kaphaja Roga
C) Kustha Roga
D) All the above

227. Yogaraja Guggulu with Guduchi Kwatha indicated in
A) Agni Vardhana
B) Vatarakta Roga
C) Kustha Roga
D) All the above

228. Yogaraja Guggulu with Darvi Kwatha indicated in
A) Agni Vardhana
B) Meha Roga
C) Kustha Roga
D) All the above

229. Yogaraja Guggulu with Gomutra indicated in
A) Agni Vardhana
B) Pandu Roga
C) Kustha Roga
D) All the above

230. Yogaraja Guggulu with Madhu indicated in
A) Agni Vardhana
B) Medo Roga
C) Kustha Roga
D) All the above

231. Yogaraja Guggulu with Triphala Kwatha indicated in
A) Agni Vardhana
B) Netra Roga
C) Kustha Roga
D) All the above

232. Yogaraja Guggulu with Nimba Kwatha indicated in
A) Agni Vardhana
B) Kustha Roga
C) Kustha Roga
D) All the above

233. Yogaraja Guggulu with Punarnavadi Kwatha indicated in
A) Agni Vardhana
B) Udara Roga
C) Kustha Roga
D) All the above

234. Yogaraja Guggulu with Pippali Kwatha indicated in
A) Agni Vardhana
B) Shotha Roga
C) Kustha Roga
D) All the above

235. Narayana Churna with Badara Jala indicated in
A) Agni Vardhana
B) Gulma Roga
C) Kustha Roga
D) All the above

236. Narayana Churna with Dadhi Mastu indicated in
A) Agni Vardhana
B) Gulma Roga
C) Atisara Roga
D) All the above

237. Narayana Churna with Ushnambu indicated in
A) Ajirna
B) Gulma Roga
C) Kustha Roga
D) All the above

238. Narayana Churna with Triphala Kwatha indicated in
A) Agni Vardhana
B) Udara Shula
C) Kustha Roga
D) All the above

239. Rasa Prapati with Rasna Churna indicated in
A) Agni Vardhana
B) Unmada
C) Kustha Roga
D) All the above

240. Rasa Prapati with Brahmi Swarasa indicated in
A) Agni Vardhana
B) Apasmara
C) Kustha Roga
D) All the above

241. Kankayana Vati with Godugdha indicated in
A) Agni Vardhana
B) Pittaja Gulma
C) Kustha Roga
D) All the above

242. Kankayana Vati with Go Mutra indicated in
A) Agni Vardhana
B) Kaphaja Gulma
C) Kustha Roga
D) All the above

243. Kankayana Vati with madya indicated in
A) Agni Vardhana
B) Vataja Gulma
C) Kustha Roga
D) All the above

244. Indication of Sahacharadi Taila
A) Kampa
B) Pinasa
C) Unmada
D) All the above

245. Indication of Murivenna Taila
A) Sandhivata
B) Bone fracture
C) Dislocation of bones
D) All the above

246. Indication of JatyadiTaila
A) Nadi Varna
B) Dagdha Varna
C) Dusta Varna
D) All the above

247. What is the primary goal of pharmacovigilance in Ayurveda?
A) Improve marketing of herbal products
B) Ensure drug safety and monitor adverse reactions
C) Enhance drug potency
D) Increase production of Ayurvedic medicines

248. Which of the following organizations oversees pharmacovigilance for Ayurveda drugs in India?
A) WHO
B) Indian Medical Association (IMA)
C) Ministry of AYUSH
D) Food and Drug Administration (FDA)

249. What is the official program for pharmacovigilance in Ayurveda called?
A) ADR Reporting System
B) National Ayurveda Pharmacovigilance Program (NAPvP)
C) Ayurveda Medicine Safety Initiative (AMSI)
D) Pharmacovigilance India

250. Which of the following is an important element of pharmacovigilance?
A) Drug promotion
B) Reporting adverse drug reactions (ADRs)
C) Manufacturing drugs
D) Formulating herbal medicines

251. Who can report an adverse drug reaction (ADR) in the pharmacovigilance system?
A) Only doctors
B) Only pharmacists
C) Patients, doctors, and healthcare professionals
D) Only government officials

252. Why is pharmacovigilance important for Ayurveda drugs?
A) To control illegal drug trade
B) To improve drug marketing
C) To ensure the safe use of traditional medicines
D) To reduce the production cost of Ayurveda drugs

253. Which of the following is a challenge specific to pharmacovigilance for Ayurveda drugs?
A) Lack of ADR reporting mechanisms
B) Misidentification of plant sources
C) Overprescription of allopathic medicines
D) Underregulation of pharmaceutical companies

254. The term "adverse drug reaction" (ADR) refers to which of the following?
A) A positive effect of a drug
B) An unintended harmful effect of a drug
C) A therapeutic benefit of a drug
D) A reduction in disease severity

255. Which Ayurvedic formulation is most associated with the need for monitoring in pharmaco-vigilance?

A) Rasashastra (Herbo-Mineral) Preparations

B) Churna (powdered) formulations

C) Ghrita (ghee-based) preparations

D) Kwatha (decoctions)

Key Answers

1.	D	35.	B	69.	C	103.	B
2.	D	36.	C	70.	C	104.	B
3.	D	37.	B	71.	A	105.	B
4.	A	38.	C	72.	A	106.	B
5.	A	39.	A	73.	A	107.	B
6.	B	40.	A	74.	A	108.	B
7.	D	41.	D	75.	C	109.	A
8.	D	42.	B	76.	B	110.	A
9.	A	43.	A	77.	B	111.	B
10.	C	44.	B	78.	A	112.	B
11.	D	45.	D	79.	A	113.	B
12.	C	46.	D	80.	B	114.	B
13.	C	47.	A	81.	A	115.	D
14.	D	48.	A	82.	A	116.	B
15.	B	49.	A	83.	A	117.	B
16.	D	50.	D	84.	A	118.	C
17.	B	51.	B	85.	C	119.	C
18.	A	52.	A	86.	C	120.	C
19.	C	53.	D	87.	C	121.	C
20.	B	54.	A	88.	B	122.	C
21.	B	55.	A	89.	C	123.	C
22.	D	56.	D	90.	C	124.	C
23.	C	57.	B	91.	C	125.	C
24.	A	58.	D	92.	C	126.	A
25.	A	59.	A	93.	C	127.	A
26.	B	60.	D	94.	A	128.	A
27.	C	61.	A	95.	A	129.	B
28.	A	62.	D	96.	A	130.	A
29.	D	63.	D	97.	A	131.	C
30.	C	64.	A	98.	C	132.	B
31.	D	65.	B	99.	C	133.	B
32.	A	66.	B	100.	C	134.	B
33.	B	67.	A	101.	B	135.	B
34.	B	68.	D	102.	B	136.	A

137. A
138. A
139. A
140. D
141. D
142. D
143. D
144. D
145. B
146. A
147. B
148. C
149. B
150. A
151. C
152. B
153. B
154. A
155. C
156. A
157. A
158. A
159. C
160. A
161. A
162. A
163. B
164. C
165. B
166. B
167. B
168. B
169. B
170. D
171. D
172. D
173. D
174. D
175. D
176. D
177. D
178. D
179. A
180. B
181. D
182. D
183. D
184. D
185. A
186. A
187. D
188. D
189. D
190. D
191. D
192. A
193. D
194. D
195. D
196. D
197. D
198. D
199. D
200. D
201. D
202. D
203. D
204. D
205. D
206. D
207. D
208. A
209. D
210. D
211. D
212. D
213. A
214. D
215. C
216. A
217. B
218. B
219. B
220. B
221. C
222. C
223. C
224. B
225. B
226. B
227. B
228. B
229. B
230. B
231. B
232. B
233. B
234. B
235. B
236. C
237. A
238. B
239. B
240. B
241. B
242. B
243. B
244. D
245. D
246. D
247. B
248. C
249. B
250. B
251. C
252. C
253. B
254. B
255. A

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About the Book

Rasashastra & Bhaishajya Kalpana is one of the most important branch of Ayurveda. It basically deals with the preparation of Ayurvedic medicines using Metallic / Mercurial, Nonmetallic & herbomineral drugs. Rasashastra subject covers the entire field of inorganic pharmaceutical preparations like metallics, non-metallic compound of Ayurvedic materia medica. These Rasausadhis are appreciated for their smaller dosages, quicker effectiveness, long durability etc. Thus, the Rasausadhi preparations plays an important and major role in curing the alling human beings. Bhaishajya Kalpana mainly covers the entire field of Herbal & organic pharmaceutical preparations like Swarasa, Kashaya, Churna, Guti-Vati, Asava-Arishta, Avaleha, Ghrutam-Tailam etc. Sometime to compete with need of all time availability, easy dispensing, palatability etc and for such enumerable reasons a lot and lots of Kalpanas are developed.

The present book is basically intended for the Under Graduate students of Ayurveda studying in 2nd Professional B.A.M.S. Arrangement of chapter in this text book of Rasashastra & Bhaishajya Kalpana according to Course Curriculum for Second Professional BAMS (Prescribed By NCISM). Important references for Bruhatrayis, Laghutrayi, books related to Rasashastra and Bhaishajya Kalpana have been collected. Book covered all the syllabus topics chapter wise Aushadhi Prayoga Vigyana, Single drug (Herbal & Mineral), Single drug (Bhasma, Shuddha & Pishti), Aushadhi Kalpa -I (Compound formulations), Aushadhi Kalpa-II (Compound Drugs/Formulations), Dosage Forms & Cosmetic Products, Nutraceuticals, Anupana Prayoga for Aushadhi Kalpa, Aushadhi Prayoga Marga, Rational prescription along with safe dispensing ofAyurvedic formulations, Traditional & Local health Practices and Pharmacovigilance for Ayurveda drugs. Highlighted all most all the concepts of Rasashastra and Bhaishajya Kalpana in a simple language with illustration of tables, chart, and images.

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